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The Effects of Teacher-Set and Student-Set Accelerated Reader Goal Setting on Reading Comprehension and Student Attitudes Towards Reading in Fourth- and Fifth-Grade Students

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THE EFFECTS OF TEACHER-SET AND STUDENT-SET ACCELERATED READER GOAL SETTING ON READING COMPREHENSION AND STUDENT ATTITUDES TOWARDS READING IN FOURTH- AND FIFTH-GRADE STUDENTS

by

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Dedication

This dissertation is dedicated to my son, Knox, and all of my nieces and nephews. May they all chase their wildest dreams and persevere until their goals are attained.

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To my son. I started this journey when you had just turned three years old. Now you are a thriving first-grader. I did this all for you. I hope you one day understand this and are inspired to push your limits as well.

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Abstract

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The purpose of this research study was to compare the impact of Teacher-Set Accelerated Reader goals (TSAR) with Student-Set Accelerated Reader goals (SSAR) of fourth- and fifth-grade students. The goal of this research study was to determine which type of goal setting approach influences reading growth the most as measured by the easyCBM assessment. Student attitudes towards reading were also examined.

While the results of a logistic regression provided little support for the idea that the student's or his/her teacher's choice of the student's AR goals enhanced the student's chances of AR goal attainment, other analyses suggested that the student's choosing had positive effects. An OLS regression analysis of students' easyCBM posttest scores indicated that, controlling for prior achievement, easyCBM pretest scores, and other demographic variables, allowing the student to choose his or her own goals is linked to greater growth in reading. In terms of student affect, a similar sort of OLS analysis linked student choice of reading goals to improved attitudes towards recreational reading, but the link between student choice and improved attitudes towards academic reading was only observed among Grade 5 participants in the study.

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Chapter 1

Introduction of the Study

Accelerated Reader (AR) is a computerized reading software program founded in 1986 ("Our Story," 2016). The program is still widely used by schools across the globe today. Currently, schools in more than 60 countries use Renaissance products including 1/3 of all schools in the United States ("Join the Renaissance Team," 2016). Although a plethora of literature exists in regard to AR, there is a current gap in knowledge that is prevalent as it relates to AR and the method in which goals are set. Furthermore, a majority of the research pertaining to AR is quite dated, therefore a need exists for more current research to be conducted. The present study contributes to the existing literature base pertaining to AR, all while investigating topics that have yet to be studied.

As students reach the upper elementary grades, motivation towards success tends to become a problem. To combat this issue, students should take an ownership role in their goals and evaluations in education (Carroll & Christenson, 1995). Platz (1994) notes the boredom students experience while engaged in routine learning strategies can be remedied if students become involved in how their learning takes place.

The researcher investigated these theories by comparing the impact of Teacher-Set Accelerated Reader goals (TSAR) with Student-Set Accelerated Reader goals (SSAR) of fourth- and fifth-grade students. The goal of this research study was to determine which influences reading growth the most as measured by the easyCBM assessment. Student attitudes towards reading were also examined via student responses on the Elementary Reading Attitude Survey (ERAS) (McKenna & Kear, 1990).

Background of the Problem

Reading achievement is a problem in the United States (Kamhi, 2009; Lindblom, 2005; Spichtig et al., 2016). Young children are experiencing the steepest decline in literary reading (NEA Report, 2004). The absence of reading abilities will negatively impact a child's future (Lindblom, 2005). This is troublesome because literary reading tends to directly impact the future lifestyles of children (NEA Report, 2004). Spichtig et al. (2016) compared comprehension-based silent reading efficiency of students today and students in 1960. Results indicated that students in 1960 experienced higher rates of word reading automaticity than students in today's world.

Even with an abundance of effective, instructional reading programs at our fingertips, our nation continues to experience reading failure (Kamhi, 2009; McMaster et al., 2014; Schaffner, Schiefele, & Ulferts, 2013). Evidence-based literacy programs have not had the desired effect on reading achievement (Kamhi, 2009; McMaster et al., 2014; Schaffner et al., 2013). McMaster et al. (2014) suggests when implementing any research-based program, one should create a balance of maintaining the core components of the program, all the while modifying it to fit individual needs. Schaffner et al.'s (2013) research uncovered the possibility of extrinsic reading motivation strategies possibly having negative implications on students' actual motivation, as well as reading comprehension abilities. According to a study conducted by Everhart (2005), female students tend to favor the AR program more than male students and are typically motivated by reading and discussing books with their peers. Everhart (2005) also found male students are typically motivated by prizes, recognition, and praise.

Student achievement can be improved via formative assessment practices with a goal of student ownership of learning (Platz, 1994). Pavonetti, Brimmer, & Cipielewski (2002), conducted a study in which students' reading behaviors in middle school were examined. Their research indicates that students who participated in AR in elementary schools did not, in turn, read more in middle school. In fact, students who did not participate in the AR program spent more time reading.

Statement of the Problem

A current gap in knowledge exists as it relates to Accelerated Reader (AR) and the method in which goals are set. The current study contributes to the existing literature pertaining to AR, all while investigating topics that have yet to be studied. Furthermore, a majority of the research pertaining to AR is quite dated, therefore there is a need for more current research to be conducted.

Purpose of the Study

The purpose of this study was to compare the impact of Teacher-Set Accelerated Reader goals (TSAR) and Student-Set Accelerated Reader goals (SSAR) on Fourth and Fifth Grade students' reading comprehension growth and attitudes towards recreational and academic reading.

Potential Significance of Study

According to Groce and Groce (2005), the implementation of AR varies drastically within schools and classrooms. It is the educator's responsibility to modify the program to fit the needs of his/her students in order to foster a life-long love for reading. Groce and Groce (2005) hope more teachers take their views into consideration and move towards student choice and internal motivation when implementing AR. After

determining reading achievement impacted all content areas, Melton, Smothers, and Anderson (2004) called for a need for additional research to be conducted to determine if student motivation changed before and after a student actively participates in the AR program.

The current study contributed a new piece of research to the already existing body of work concerning AR. There is a need for more current AR research to be conducted as much of the existing literature is quite dated. In addition to this contribution, the current study addressed the method in which AR goals are set… a topic that has not been examined in the past.

Research Questions

This study had a control and treatment group. The control group pursued AR goals as determined by their teachers. The treatment group determined their own reading goals for the six-week period in which the study was conducted. The procedures to be conducted are described below for each research question.

1. Is there a significant difference in the number of students meeting their Accelerated Reader goals by their gender, grade level, and experimental condition as TSAR or SSAR?
2. Is there a significant difference in students' posttest reading achievement on an easyCBM posttest assessment by their gender, grade level, and experimental condition as TSAR or SSAR?
3. Is there a significant difference in students' posttest attitudes towards ERAS recreational reading by their gender, grade level, and experimental condition as TSAR or SSAR?

4. Is there a significant difference in students' posttest attitudes towards ERAS academic reading by their gender, grade level, and experimental condition as TSAR or SSAR?

Research Design

Organization of the study. The study used a quasi-experimental design. All participants took an easyCBM progress monitoring assessment as a pretest data point, as well as the Elementary Reading Attitude Survey (ERAS), which gaged attitudes towards reading. Participants grouped by classroom were then randomly assigned to either the TSAR or SSAR group. The study took place during a six-week period during the spring of the 2015-16 school year. Participants in the treatment and control were expected to meet the established Accelerated Reader goals set for the six-week period. At the end of the six-weeks, the teachers administered the easyCBM test and the ERAS as posttests for comparison purposes.

Population. The elementary school in which the study was conducted is located in rural southwestern Tennessee. With an economically disadvantaged rate of 33.7%, this school is the only elementary school in its district that does not receive Title 1 services (State Report Card, 2016). RTI services are provided for students in need of interventions. All Grade 4 and Grade 5 students were given the opportunity to participate in the study. Fourth- and fifth-grade students were chosen for this study due to the intense focus put on the implementation of Accelerated Reader (AR) by their teachers. All nine English/Language Arts (ELA) teachers in these grades were asked to participate in this study.

Variables. Out of the nine participating classrooms, 163 fourth- and fifth- grade students returned the informed consent paperwork. The control group was comprised of five classrooms (64 students). The teachers in this group assigned their students Accelerated Reader TSAR goals. The remaining four classrooms (99 students) were assigned to the treatment group. The students in this group set their own SSAR goals. All students participated in their regular ELA classes with Accelerated Reader being used as a supplemental program.

Sample. The study sample consisted of 114 Grade 4 and 48 Grade 5 students, and one student whose grade was not reported. An e-mail (Appendix B) was sent asking for their attendance in a meeting (Appendix C) in which the research study would be discussed. All nine teachers attended the meeting. The teachers were randomly assigned to either the treatment or the control group. They were then given informed consent paperwork (Appendix D) to send home with each of their students. Guardians were asked to sign the forms giving their permission for their child to participate in the study.

Although some of their demographic data was incomplete, 163 students at Grade 4 (69.9%) and Grade 5 (29.4%) were observed to have participated in this study in total. While female students (55.2%) were seen to have slightly outnumbered males (44.9%), the distributions of other respondent characteristics were more skewed. By ethnicity, almost 80% of those sampled were Caucasian (79.1%), with the remaining 20% of the sample made up of African American (13.6%) students and students of "other" ethnicities (7.4%). With no data available on the prior achievement levels of about 6% of the sample, about two-thirds of the students were recorded as having scored at the "proficient" (45.4%) or "advanced" (20.2%) levels on the state's standardized test

(TCAP) in reading, with only about one-third of the sample scoring at "basic" (24.5%) and "below basic" (3.7%) levels.

Theoretical Framework

Reading achievement is a problem in the United States (Kamhi, 2009; Lindblom, 2005; Spichtig et al., 2016). Young children are experiencing the steepest decline in literary reading (NEA Report, 2004). The absence of reading abilities will negatively impact a child's future (Lindblom, 2005). This is troublesome because literary reading tends to directly impact the future lifestyles of children (NEA Report, 2004). Spichtig et al. (2016) compared comprehension-based silent reading efficiency of students today and students in 1960. Results indicated that students in 1960 experienced higher rates of word reading automaticity than students in today's world.

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A current gap in knowledge exists as it relates to Accelerated Reader (AR) and the method in which goals are set. The current study contributes to the existing literature pertaining to AR, all while investigating topics that have yet to be studied. Furthermore, a majority of the research pertaining to AR is quite dated, therefore there is a need for more current research to be conducted.

Assumptions, Limitations, and Delimitations

Due to the fact that the study was conducted in a public school setting in which all classrooms were not identical in demographic make-up, certain limitations did exist within the study. The background of the participants was limited to the specific characteristics of only those students who returned informed consent paperwork at the particular elementary school in which the study was conducted. This situation lead to inequalities in the number of students in the TSAR and SSAR groups, as well as in their corresponding grade levels. This limits the equality of the treatment and control groups.

The experience among teachers and the way in which they implemented AR and set AR goals varied in each classroom in the TSAR group. Furthermore, the study was

limited to a six-week period due to the fast approaching conclusion of the school year. These factors may have affected the results of the Elementary Reading Attitude Survey, as well as the easyCBM.

Definitions of Terminology

Several terms and acronyms were used throughout the present study. For the purposes of lucidity, the following concepts are used operationally throughout the entirety of this manuscript.

AR - The abbreviation for Accelerated Reader. Accelerated Reader is a literature-based, computerized program in which students select their own reading materials and are assessed via multiple-choice quizzes. Students earn points for their performance on the quizzes (Groce & Groce, 2005).

easyCBM Assessment - A series of computerized tests used to measure reading comprehension growth within the present study.

ERAS - The abbreviation for the Elementary Reading Attitude Survey. McKenna and Kear (2005) created this instrument as a means to estimate student attitudes towards reading.

SSAR - The abbreviation for Student-Set Accelerated Reader goals. Students determined their own Accelerated Reader goals for a given six-week period.

TCAP - The abbreviation for Tennessee Comprehensive Assessment Program. TCAP was the standardized test taken in Tennessee public schools in which students were given performance ratings of advanced, proficient, basic, or below basic.

TSAR - The abbreviation for Teacher-Set Accelerated Reader goals. Teachers determined each student's reading goal for a given six-week period.

Summary

The purpose of this research study was to compare the impact of Teacher-Set Accelerated Reader goals (TSAR) with Student-Set Accelerated Reader goals (SSAR) of fourth- and fifth-grade students. The goal of this research study was to determine which influences reading growth the most as measured by the easyCBM assessment. Student attitudes towards reading were also be examined via student responses on the Elementary Reading Attitude Survey (ERAS) (McKenna & Kear, 1990).

The next chapter presents summaries of the existing literature that embodies the topic of Accelerated Reader. The history, mechanics, and effects of AR, as well as problems with implementation, are thoroughly examined. The nature of reading is discussed as it relates to student attitudes, motivation, and goal-setting. The chapter concludes with an examination of existing literature concerning student ownership of learning, student-directed learning, and teacher-set goals versus student-set goals.

Chapter 2

Literature Review

Accelerated Reader is a computer-based, individualized reading program in which students read books and then take computerized quizzes to assess their comprehension. Books are leveled, and points are accrued when quizzes are passed. The purpose for AR implementation is to increase the motivation to read and reading comprehension abilities among participants (Williamson, 2008). There is an extensive amount of existing literature relevant to Accelerated Reader (AR). Most AR related studies examine the relationship of the implementation of AR and the program's impact on student achievement. AR continues to be widely used in the United States suggesting a need for more current research. The prominent areas of investigation related to AR focused research studies are divided in support of the program (Johnson & Howard, 2003; McGlinn & Parrish, 2002; Nunnery, Ross, & McDonald, 2006) and those that negate the benefits claimed by its proponents (Melton et al., 2004; Pavonetti et al., 2002; Williamson, 2008).

Accelerated Reader (AR)

History of AR. Renaissance Learning, the company that created AR, strives to aide students in reaching their full potential by continuously making growth each year ("Our Mission," 2016). Judi and Terry Paul founded Renaissance Learning in 1986 ("Our Story," 2016). Currently, schools in more than 60 countries use Renaissance products, including 1/3 of all schools in the United States ("Join the Renaissance Team," 2016).

AR mechanics. According to the Guided Independent Reading report (2012), AR is a computer-based tool used to complement any reading program by increasing student practice. Student practices are differentiated based on books of varied reading levels and interests. After students read their book of choice, they then take a computerized AR quiz which consists of 5-20 multiple choice questions. Teachers and students are then provided with immediate feedback based on the quiz performance (Guided Independent Reading, 2012). Points are then awarded to students.

Effects of AR. The impact AR can have on students varies according to existing research (Cudderback & Ceprano, 2002; Huang, 2011; McGlinn & Parrish, 2002). McGlinn and Parrish (2002) examined the progress of fourth- and fifth-grade ESL students after being encouraged to participate in an incentive-based AR program. A time slot of 45 min daily was set aside during which students could participate in AR. The findings of this research suggest an increase in the time these students spent reading. Students' attitudes towards reading improved as well. The number of books read per month increased by an average of 18.9 books. Out of the 10 participants, one did not enjoy free-reading time. Although there was only a moderate increase in reading growth overall, the greatest increase in reading attitudes was found among the students who did improve their reading levels. Huang (2011) studied the effects the AR program had on middle-school students' reading achievement and motivation. Although the time students spent reading increased with the implementation of AR, students' reading scores did not. This study also found students did not experience any additional motivation to read while using the program.

The Guided Independent Reading report (2012) summarized the data provided by over two million students nation-wide who use Accelerated Reader. AR best practices were determined based on information from this report. According to these findings, the overall percentage correct on quizzes has a direct impact on reading growth. Findings also suggested students should spend at least 25 min a day reading. In addition to these recommendations, it was noted that students should read at the highest level possible while still being able to pass AR quizzes.

AR implementation can be beneficial to student achievement (Ross, Nunnery, Avis, & Borek, 2005; Samuels & Wu, 2003; Shannon, Styers, Wilkerson, & Peery, 2015). Shannon et al. (2015) studied 344 elementary students in three schools for a time period of one school year. This research noted that at every grade level, classrooms that implemented AR had higher scores on the STAR posttests than did the classrooms that did not use AR. Ross et al. (2005) studied 10,000 students in third- through eighth- grade in two school districts in Mississippi school districts. Schools that implemented AR showed higher rates of student performance than the control schools. Samuels and Wu (2003) studied 67 third- and fifth- grade students for six months. Some students completed book reports therefore receiving delayed feedback on their performance. Other students received immediate feedback on reading performance through the use of AR. Findings indicated the students who used AR made twice the gains in reading comprehension than did their counterparts.

Sadusky and Brem (2002) studied two schools with different economically disadvantaged statuses. One school practiced irregular usage of AR and had an economically disadvantaged rate of 18%. The other school had a more consistent and

structured manner of implementing AR and had an economically disadvantaged rate of 38%. After a five-year period, the school that used AR more consistently made gains of 13 percentiles. The school with the lower economically disadvantaged rate did not make any gains. Husman and Brem (2005) conducted a similar longitudinal study of 300 students at two different elementary schools. Contrary to the previous study, these two schools were matched to be of similar demographic backgrounds. The experimental school practiced a heavy implementation of AR, while the control school used it more haphazardly. Not only did the experimental school have higher achievement levels than the control school, but students developed a greater love for learning as well.

Johnson and Howard (2003) studied a group of over 700 third- through fifth-grade students in an urban school district. Results from a Multivariate Analysis of Variance support AR's effectiveness. Students who used the program more frequently showed more reading comprehension gains than their counterparts. Students who read below grade level were found to use the program the least.

When analyzing the effectiveness of AR in a randomized study of over 900 urban third- through sixth-graders in multiple schools, Nunnery et al. (2006) found students who participated in AR made significantly higher reading achievement gains than those in the control group. The researchers also examined the amount in which AR was implemented in each class. Students with learning disabilities made greater gains in the high-implementation classes as opposed to the low -implementation classes.

Topping and Fisher (2003) investigated the impact of AR in 13 schools in the United Kingdom. Overall, students from all 13 schools made "abnormally high" gains when participating in AR. Topping and Fisher (2003) also found variations in the way in which

the program was implemented. The ways in which teachers intervened when students performed poorly on tests varied considerably.

Topping and Paul (1999) studied the relationship of practicing reading with reading and reading performance in over 600,000 students across all grade levels. This study suggests there is a positive relationship between practicing reading and reading achievement. Topping and Paul (1999) found the time spent practicing reading in school increases gradually until fifth-/sixth-grade then begins to decline. Some evidence suggests private school students spend more time reading in school than public school students. Vollands, Topping, and Evans (1999) suggest AR does not only increase the time a student spends reading and increase academic gains, but it also positively impacts the ways in which students engage with the literature.

The faculty of Delsea Regional High School in New Jersey used AR "to help students gain confidence in reading to become self-motivated readers" (Moyer & Williams, 2011, p. 70). Students were guided to select books of interest to them. When students scored below 70% on a test, they conferenced with the teacher and discussed strategies that would lead to success. Students were given point goals and ranges based on their reading abilities as determined by the STAR reading test. Students had input on their goals and how they were graded. Students were given certificates for achieving goals and invited to a celebration at the end of each grading period.

After not making adequate yearly progress in reading, students at Pittsburg Community Middle School (PCMS) in Kansas began using the AR program and have since received a yearly Standard of Excellence rating (Pfeiffer, 2011). At PCMS, teachers focused on reading ranges, point goals, testing averages, goals for testing

averages, book level goals, incentives, and reading level improvement. AR is used during Tier 1 instruction in their Response to Intervention (RTI) model. A 30-min block of the school day is set aside for reading. Since the implementation of AR, PCMS is no longer on the list of schools not making adequate yearly progress in reading. Instead, they are on the prestigious list of schools who have received the Standard of Excellence Award.

Cudderback and Ceprano (2002) designed a study to determine whether or not AR positively affected the development of comprehension among young emergent readers. Participants were first-graders from a rural school who did not meet the requirements to advance to second grade. Twelve of 36 of these students began AR during summer school and were studied throughout the summer-school session. Results indicated when used as a supplemental program coupled with other reading programs and/or materials, it did positively benefit the growth of reading comprehension. In a reflection on the practices of a school that implemented AR for five years as a supplemental program in a different study, Guastello (2002) found the program to be highly motivational and increased literacy within the home as well.

To test motivational claims set forth by previous research, Pavonetti et al. (2002) investigated the idea AR creates motivation in students through the experience of success obtained when using the system. The study explored the impact AR had on middle-school students who participated in the program in elementary school as it pertains to the amount of reading they engaged in once they became middle school students and no longer had to take part in the AR program. The participants were seventh-grade students from two suburban districts and one exurban district. The study's overall findings did not

support the idea that AR participation led to lifelong readers. Middle school participants who engaged in AR in elementary school did not read more than their peers once they enrolled in middle school. The participants who never had used AR actually read more in middle school.

Long and Bonds-Raacke (2012) examined a student's age of entry into formal education as it relates to AR performance. The subjects of this study were kindergarten through fifth grade students in two different Mid-western elementary schools. Long and Bonds-Raacke (2012) tested their hypothesis of which the younger students in each grade would earn fewer AR points than their older counterparts. It was also hypothesized that females would earn more points than males. Researchers also examined the number of quizzes taken and passed and the percentage scores on the quizzes. Significant correlations were not discovered in this study until fourth grade. A positive correlation between age in months and the number of AR tests passed was found among fourth grade students. A significance difference in gender and quiz scores was also uncovered in this study.

Melton et al. (2004) compared the Terra Nova pretest and posttest results in the area of fifth-grade reading in two schools in Jackson, Mississippi. One of the schools implemented AR for a year, along with the existing reading program, and the other school did not use AR. The students who used the AR program scored significantly lower than the non-AR group. However, there were some differences among quartiles and subgroups. There was no significance difference in the comparison schools among students in the lowest quartile and Caucasians ranked significantly higher than African-Americans in the AR group.

In a study conducted by Williamson (2008), five schools that participated in AR were compared to five schools that did not participate in AR. The link between ninth-grade students' reading pass rates on the Texas Assessment of Knowledge and Skills (TAKS) test and the use of AR was investigated. No significant difference in the performance on the TAKS test between the two groups was found.

Although the above mentioned studies examined many aspects of AR, none mention anything concerning AR goals. More specifically, the options of teacher-set goals and student-set goals are never mentioned. Furthermore, there is a need for more current research to be conducted around the effects of AR.

Problems with implementation. The way in which AR is implemented can be problematic in terms of book selection, access to books, requirements put forth by teachers, and training teachers who use the program (Grigsby, 2014; Krashen, 2003; Solley, 2011). Grigsby (2014) found issues within her library in regard to the labeling and color coding of AR books. One problem she has noticed is the levels do not necessarily coincide with the maturity level of the book and/or the student. Grigsby also noted it was her belief students should have a freedom to choose the books they want based on interest level and purpose.

Krashen (2003) claimed there was supporting evidence to students reading more and better when given access to more books. Setting aside specific times dedicated to reading also proved to be beneficial. Krashen (2003) suggested that greater access is not always provided for students.

Cregar (2011) reported when students search for AR books in the library, they often just look at the book level and the points assigned and reject books not falling within their

reading range. She observed varying teacher demands impact student book selection and expressed concerns with the usage of point goals. Cregar (2011) went as far as to question whether or not students' civil rights are being violated with the way in which AR hinders a student's freedom of book selection. Husman, Brem, and Duggan (2005) suggest students can easily become competitive in nature when comparing reading levels, points, and averages with their peers. However, if this information is kept confidential, then students can become more focused on personal goals.

After receiving training from the makers of Accelerated Reader (AR), Solley (2011) concluded the success of AR was dependent upon how it is implemented and upon the level of AR training provided to participating teachers. She suggested that AR be used only in a positive way. Furthermore, she felt the "ineffectiveness of AR cannot be blamed on the program itself, but rather on the absence of training in its usage" (Solley, 2011, p. 49).

Huang (2011) found there is a lack of peer-reviewed articles on AR and there has not been many mixed methods or qualitative research conducted on the topic. Huang noted much of the existing research has been conducted by the company representing AR. Huang conducted a study investigating the impact of AR achievement among middle school students. The results of this study indicated AR had no significant impact on reading scores of the participants. Huang suggested flexibility in book selection and personal interested provided students with more motivation than prizes and tests.

Groce and Groce (2005) examined ways in which the AR program was implemented as it relates to assessment, text interaction and aesthetics, motivation, and book selection. It was determined that 75% of the teachers surveyed relied on AR as a component to their

reading instruction. After their analysis, Groce and Groce proposed modifications that could be made to the implementation of this program. Suggestions included letting students engage in authentic assessments, surveying motivating factors for students, providing students with more forms of assessments than just AR quizzes, and allowing students to select from a wide range of books from which they could read.

Although the above mentioned studies examined many aspects of AR, none mention anything concerning AR goals. More specifically, the options of teacher-set goals and student-set goals are never mentioned. Furthermore, there is a need for more current research to be conducted around the implementation of AR.

The Nature of Reading

Students' attitudes towards reading. In reviewing the research, it was noted that the majority of studies find students' attitudes toward reading can vary (Bastug, 2014; McKenna, Conradi, Lawrence, Jang, & Meyer, 2012). Bastug (2014) examined over a thousand Turkish fourth and fifth grade students' attitudes towards reading and the impact these attitudes had on student achievement and reading comprehension. This study found student achievement can be significantly predicted by student's attitude towards reading. A student's ability to comprehend a piece of literature also can also play a critical role in student achievement.

For a 12-week period, Chua (2008) studied the effects of a sustained silent reading program (SSR) on secondary students. This study revealed the number of students who read books for more than 60 min after school declined. The number of students who found enjoyment in reading leisurely increased.

When examining 26 fifth-grade students, Corcoran and Mamalakis (2009) found with few exceptions, students in their study did not particularly like to read. Nonetheless, most students did acknowledge the importance of reading. Corcoran and Mamalakis (2009) suggest that teachers work diligently towards implementing strategies to ensure all students are motivated to become life-long readers.

McKenna et al. (2012) surveyed the reading attitudes of over four thousand middle school students in 23 states. Different purposes for reading, such as recreational versus academic, were examined, as well as different forums for reading text, e.g., print versus digital. Recreational print, recreational digital, and academic digital subscales all showed a slow and gradual decline of students' attitudes towards reading as they progressed in middle school. In terms of gender, males preferred digital forms of recreational reading. Females had more positive attitudes when it came to academic print and digital and recreational print. Attitudes for academic print did not show any significant differences according to a student's grade level.

Although the above mentioned studies examined many aspects of students' attitudes towards reading, none make the connection of how these attitudes relate to AR goals. More specifically, the options of teacher-set goals and student-set goals are never mentioned.

Reading motivation. In reviewing the research, it was noted that the majority of studies find students' attitudes toward reading impact student achievement (Embrey, 2011; Gabrell, 2011; Zentall & Lee, 2012). Valid concerns exist regarding student reading achievement accompanied by the lack of motivation to read often found among elementary school students (Embrey, 2011). Embrey (2011) also found there is a

constant struggle for children to become proficient readers and concludes this struggle will likely continue into adulthood if proficiency is not obtained early. Gambrell (2011) found one key factor to increase motivation involves increasing time spent reading. Not only would this practice lead to student motivation resulting in students choosing to read for pleasure on their own, but it would increase reading proficiency as well.

Klauda and Wigfield (2012) found results supporting the positive impact the support a child feels he/she has can have on his/her motivation to read. They found when older children feel support from their parents and peers, their motivation to read increases. It was also noted students in this study that students overall felt more support from their mothers than they did from their fathers.

Language arts teacher Miller (2012) recognized the frequency and volume of works a student reads is directly related to their reading achievement; however, the challenge lies with motivating the students to read. In her classroom, Miller found students were more motivated to read when given an adequate amount of time during the school day to read and when given the opportunity to select their own books. When investigating, Schaffner et al. (2013) found, "a positive contribution of intrinsic motivation and a negative contribution of extrinsic motivation to reading comprehension that were largely mediated by reading amount" (p. 382). Schiefele et al. (2012) examined research related to reading motivation over the past two decades. Based on their analyses, Schiefele et al. (2012) found many studies proving positive implications of intrinsic motivation and disproving extrinsic motivation as beneficial. This suggests extrinsic motivation can have detrimental effects on desired outcomes and intrinsic methods of motivation can be beneficial when used as an intervention.

Morgan, Fuchs, Compton, Cordray, and Fuchs (2008) conducted an analysis of the relationship of a student's early reading skills on his/her motivation to read in following years. The researchers found students who had lower reading levels also had less motivation to read. However, their research found when a struggling reader receives interventions and his/her reading level increases, his/her motivation does not necessarily change.

Zentall and Lee (2012) performed an experimental study in which a combined motivational intervention was used among second- through fifth- grade students. Zentall and Lee found gains made among students with reading disabilities. Their findings suggest an increase in motivation results in gains in comprehension and fluency.

Although the above mentioned studies examined many aspects of student motivation, none mention anything concerning motivation as it relates to AR goals. More specifically, the options of teacher-set goals and student-set goals are never mentioned.

Goal-Setting. In reviewing the research, it was noted that goal-setting may not be beneficial for all students (Johnson, Graham, & Harris, 1997; Sideris, 2002). Johnson et al. (1997) studied the reading progress of a group of fourth- through sixth-grade students with learning disabilities. Goal-setting and self-instruction strategies were implemented, and the results did not support the improvement of reading comprehension among these students. Sideris (2002) uncovered motivating factors for students who experienced difficulty in reading and spelling. The findings of Sideris (2002) concluded these struggling students did not care about goals as much as the on-level students, nor did they possess the drive to be successful.

Swain (2005) studied the knowledge sixth- and seventh-grade students have of their reading goals. After participating in goal-oriented curriculum-based testing, students were able to identify their reading goals on their own. Madden (1997) studied 126 elementary teachers methods for motivating students. While 62% of the teachers used goal-setting as a source of motivation, 38% of the teachers focused on academic expectations. Results from teacher surveys indicated that goal setting should be accompanied by teacher support and teacher feedback in order to achieve optimal results. According to Westburg and Martin (2003), "… hope can be elevated through an organized academic instructional program of teaching children how to master goal-oriented, problem solving strategies" (p. 162).

Although the above mentioned studies examined many aspects of setting goals, none mention anything concerning AR goals in particular. More specifically, the options of teacher-set AR goals and student-set AR goals are never mentioned. Furthermore, there is a need for more current research to be conducted around the effects of AR.

Student Ownership of Learning

Student-directed learning. Research suggests student-directed learning can have a lasting positive effect on students (Chan, Graham-Day, Ressa, Peters, & Conrad, 2014; Platz, 1994; Van Deur, 2008). According to Platz (1994), the boredom students experience while engaged in routine learning strategies can be remedied if students become involved in how their learning takes place. Student achievement can be improved via formative assessment practices with a goal of student ownership of learning. This process should include clear learning expectations, evidence of their progress, and feedback (Chan et al., 2014). Van Deur (2008) studied the impact

traditional teaching methods have on South Australian elementary students' knowledge of self-directed learning. Results from this study support the theory that students identified as having low reasoning skills benefited from teacher interventions. Consequently, students with high reasoning capabilities benefited more from the process of reflection, being heavily engaged, and learning more about the process of self-directed learning. Jimenez, Browder, and Courtade (2009) studied three middle school students with moderate learning disabilities. Once these students were taught how to use a KWHL chart to analyze scientific concepts, very little instruction was needed for students to complete additional task analyses of new science content areas.

Although the above mentioned studies examined many aspects of student-directed learning, none mention anything concerning AR goals. More specifically, student-directed AR goals is never mentioned.

Student-set goals versus teacher-set goals. According to research, student-set goals can be beneficial to student achievement (Carroll & Christenson, 1995; Hannafin, 1981; Martin & Elliot, 2016). As students reach the upper elementary grades, motivation towards success tends to become a problem. To combat this issue, students should take an ownership role in their goals and evaluations in education (Carroll & Christenson, 1995). Carroll and Christenson (1995) studied a fifth-grade classroom in which students set their own AR goals. The researchers found that students needed help with setting appropriate goals, establishing an environment conducive to the process of setting goals, relating their learning to individual goals, and determining self-evaluation techniques. It was determined that students who set their own goals were able to build off of strategies they already possessed. In addition, students were also able to connect new strategies to

their personal needs. Carroll and Christenson (1995) suggested that students experienced motivation to meet their goals in great part due to the fact that they set the goals themselves.

Martin and Elliot (2016) investigated the effect of student-set "personal best" goal setting on math achievement of 89 primary and secondary students. Results indicate that students who set personal best goals showed more growth on the end of the year achievement test than those students who did not set goals for themselves. Hannafin (1981) evaluated the influence of teacher-set and student-set weekly mathematics goals on students' mathematics classroom performance. The results indicate students who set their own goals met more of their goals than did their counterparts. Although the above mentioned studies examined many aspects of student-set versus teacher-set goals, none mention anything about these goals being related to AR.

Based on this research, the following questions were addressed via the current study:

Research Question 1: Goal Achievement

Controlling for prior achievement in reading as measured by the state's standardized test (TCAP), is there a significant difference in the number of students meeting their Accelerated Reader goals by their gender, grade level, and experimental condition as TSAR or SSAR?

Research Question 2: Reading Growth

Controlling for prior achievement in reading as measured by the state's standardized test (TCAP) and an easyCBM pretest assessment, is there a significant difference in students' posttest reading achievement on an easyCBM posttest assessment by their gender, grade level, and experimental condition as TSAR or SSAR?

Research Question 3: Recreational Reading Attitudes

Controlling for prior achievement in reading as measured by the state's standardized test (TCAP) and a pretest assessment of attitudes towards recreational reading as measured by the Elementary Attitudes towards Reading Survey (ERAS), is there a significant difference in students' posttest attitudes towards ERAS recreational reading by their gender, grade level, and experimental condition as TSAR or SSAR?

Research Question 4: Academic Reading Attitudes

Controlling for prior achievement in reading as measured by the state's standardized test (TCAP) and a pretest assessment of attitudes towards academic reading as measured by the Elementary Attitudes towards Reading Survey (ERAS), is there a significant difference in students' posttest attitudes towards ERAS academic reading by their gender, grade level, and experimental condition as TSAR or SSAR?

Summary

After reviewing existing literature, the researcher concluded that a current gap in knowledge exists as it relates to Accelerated Reader (AR) and the method in which goals are set. The current study contributes to the existing literature pertaining to AR, all while investigating topics that have yet to be studied. Furthermore, a majority of the research pertaining to AR is quite dated, therefore there is a need for more current research to be conducted.

The next chapter presents detailed accounts of the process in which the study was conducted. Participants and instrumentation are described in detail. The procedures followed throughout the study are described, as well as the statistical analysis used to examine the results of the study.

Chapter 3

Research Design and Methods

Introduction

This study was of a quantitative quasi-experimental design examining the differences in reading comprehension growth and student attitudes towards reading. The purpose of this research study was to compare the impact of Teacher-Set Accelerated Reader goals (TSAR) with Student-Set Accelerated Reader goals (SSAR) of fourth- and fifth-grade students to determine which influenced reading growth the most as measured by the easyCBM assessment. Student attitudes towards reading were also examined via student responses on the Elementary Reading Attitude Survey (ERAS) (McKenna & Kear, 1990) (Appendix A). Each participant took an EasyCBM assessment and the Elementary Reading Attitude Survey (ERAS) (McKenna & Kear, 1990) for pretest and posttest purposes. This chapter presents descriptions of the participants, instrumentation, and procedures needed to conduct this study.

Participants

The study sample consisted of 114 Grade 4 and 48 Grade 5 students, and one student whose grade was not reported, in an elementary school in southwest Tennessee. With an economically disadvantaged rate of 33.7%, this school is the only elementary school in its district that does not receive Title 1 services (State Report Card, 2016). RTI services are provided for students in need of interventions.

Fourth- and fifth-grade students were chosen for this study due to the intense focus put on the implementation of Accelerated Reader (AR) by their teachers. All nine English/Language Arts (ELA) teachers in these grades were asked to participate in this

study. An e-mail (Appendix B) was sent asking for their attendance in a meeting (Appendix C) in which the research study would be discussed. All nine teachers attended the meeting. The teachers were randomly assigned to either the treatment or the control group. They were then given informed consent paperwork (Appendix D) to send home with each of their students. Guardians were asked to sign the forms giving their permission for their child to participate in the study.

Out of the nine participating classrooms, 163 fourth- and fifth-grade students returned the informed consent paperwork. The control group was comprised of five classrooms (64 students). The teachers in this group assigned their students Accelerated Reader TSAR goals. The remaining four classrooms (99 students) were assigned to the treatment group. The students in this group set their own SSAR goals. All students participated in their regular ELA classes with Accelerated Reader being used as a supplemental program.

Although some of their demographic data was incomplete, 163 students at Grade 4 (69.9%) and Grade 5 (29.4%) were observed to have participated in this study in total. While female students (55.2%) were seen to have slightly outnumbered males (44.9%), the distributions of other respondent characteristics were more skewed. By ethnicity, almost 80% of those sampled were Caucasian (79.1%), with the remaining 20% of the sample made up of African American (13.6%) students and students of "other" ethnicities (7.4%). With no data available on the prior achievement levels of about 6% of the sample, about two-thirds of the students were recorded as having scored at the "proficient" (45.4%) or "advanced" (20.2%) levels on the state's standardized test

(TCAP) in reading, with only about one-third of the sample scoring at "basic" (24.5%) and "below basic" (3.7%) levels.

Instrumentation

easyCBM. Developed by the Behavioral Research and Teaching Department at the University of Oregon and the Riverside Division of Houghton Mifflin Harcourt, EasyCBM is a research-based online progress monitoring program serving the content areas of reading and math (easyCBM Instructional Manual, 2014). After students take a progress monitoring or benchmark easyCBM assessment, teachers are provided with a plethora of reports which can be used to make data-driven instructional decisions (easyCBM Instructional Manual, 2014). For students in grades 3-8, easyCBM reading assessments measure their fluency, vocabulary, and reading comprehension levels. For the purpose of this study, the reading comprehension portion of the data was examined. Data on the reading comprehension reports included percentages correct, number of problems correctly answered, and percentile ranks for each student.

The students in this study took an easyCBM progress monitoring assessment in March of 2016. The research study was implemented during a six week period in March and April of 2016. Upon the completion of the study, each student took another EasyCBM progress monitoring assessment to measure reading comprehension growth.

Elementary Reading Attitude Survey (ERAS). McKenna and Kear (1990) developed the Elementary Reading Attitude Survey (ERAS) for the purpose of providing the public with an instrument that would measure student attitudes towards reading. This survey consists of twenty items in which students circle the pictures that correspond with how they feel about each given statement. The pictures are representative of the comic

book character Garfield and portray four different emotions ranging from very happy to very sad **(**McKenna & Kear, 1990). The items on the survey are divided into two categories, recreational (items 1-10) and academic (items 11-20).

When this instrument was being developed, McKenna and Kear (1990) administered an early version the survey to 499 Mid-Western elementary school students. After the correlation coefficients were considered, ten items were selected for both the recreational and academic portions of the survey. The survey was then administered to over 18,000 students across the nation. Proof of validity and reliability were established based on this nation-wide sample. The coefficients of Cronbach's alpha ranged from .74-.89 hence confirming reliability. Validity was established through a least squares method and varimax rotation indicating that the survey's subscales were reliable (McKenna & Kear, 1990).

The students in this research study took the ERAS in early March of 2016. The study was implemented during a 6-week period in March and April of 2016. Upon the completion of the study, each student took the survey again. The statistical procedures outlined later in this chapter were used to analyze this data.

Tennessee Comprehensive Assessment Program (TCAP). The TCAP test was the standardized test taken in Tennessee public schools in which students were given performance ratings of advanced, proficient, basic, or below basic. For the purpose of this study, TCAP data was used to indicate prior achievement levels of each student.

Procedure

The Accelerated Reader goal-setting research study was conducted by the researcher to examine reading comprehension growth and student attitudes towards

reading. The purpose of this research study was to compare the impact of Teacher-Set Accelerated Reader goals (TSAR) with Student-Set Accelerated Reader goals (SSAR) of fourth- and fifth-grade students on reading comprehension growth and student attitudes towards reading. Comprehension growth was measured with easyCBM testing and changes in attitudes towards reading were determined by student responses on the Elementary Reading Attitude Survey (ERAS).

Before the research was conducted, approval was granted by the Institutional Review Board (IRB) at the University of Memphis (Appendix E). Approval was obtained from the Board of Education of the district in which the research was conducted (Appendix F). Permission was also acquired from the school principal (Appendix F). Signed informed consent paperwork was obtained for each participant (Appendix D).

All English/Language Arts teachers in these grades were asked to participate in this study. An e-mail (Appendix B) was sent asking for their attendance in a meeting (Appendix C) in which the research study would be discussed. Topics discussed included coding, data charts, pre-assessments, group assignments, the process of goal setting, reading ranges, the use of incentives, and post-assessments. The researcher also obtained basic information from each teacher in regard to how many years of teaching experience they had, highest degree obtained, their ethnicity, and the number of students they had in each class (Appendix G). Informed consent paperwork was then disbursed. Teachers were asked to send the paperwork home with each student.

Each student took the informed consent paperwork home to their guardians (Appendix D). Upon completion of the paperwork, students returned the form to their teacher. By the end of the week, the researcher collected all informed consent letters.

Coding. In order to ensure confidentiality, each participant was assigned a number. For the duration of this study, each student was referred to by the researcher according to their given number. The researcher gave each teacher a master list of student names matched with their number (Appendix H). An original copy was kept in the researcher's locked desk drawer.

Data charts. Teachers were asked to complete a student demographic chart (Appendix I) in which they provided basic information (grade, ethnicity, gender, education status, goal achievement, and achievement levels) about each student according to their coded numbers. An additional chart was used to record easyCBM data (Appendix J). A master data chart (Appendix K) was used to record all information provided by the teachers, in addition to results from the ERAS. Once all data was recorded, it was then put into Survey Monkey.

Pre-assessments. Once the consent forms were obtained, all participants took an easyCBM progress monitoring test in March of 2016. This assessment served as a pretest for this research. The researcher asked the teachers to complete the pretest portion of their easyCBM data charts.

Students completed the Elementary Reading Attitude Survey (ERAS) to determine their attitudes towards reading prior to the start of the study (McKenna & Kear, 1990). Students wrote their code numbers on the surveys rather than their names. The researcher completed the ERAS pre-test portion of the master data chart.

Group assignments. After pretesting concluded, classrooms were randomly assigned to either the treatment or the control group. For a six-week period, all students

participated in their regular ELA classes. Accelerated Reader was used as a supplemental program.

Goal-Setting. When determining AR goals for the Teacher-Set Accelerated Reader Goals group (TSAR), teachers used their own method for determining what student goals should be. Their decisions were based on assessment performance and classroom observations. All students' guardians were updated weekly on their child's AR progress towards their goal. If parents opted to create an AR account, they also monitored their child's progress online and received text and e-mail updates. All students were encouraged to read for at least 30 uninterrupted minutes daily.

When discussing goals with participants in the Student-Set Accelerated Reader Goals group (SSAR), the teachers ensured each student understood the due date for the goals as well as reminded them of the importance of setting high, yet reasonable expectations for themselves. The teachers accepted all goals students set for themselves. All students' guardians were updated weekly on their child's AR progress towards their goal. If parents opted to create an AR account, they also monitored their child's progress online and received text and e-mail updates. All students were encouraged to read for at least 30 uninterrupted minutes daily.

Reading level ranges. Typically at the school being studied, teachers give students a reading range from which they can choose books to read based on their reading abilities. Some teachers give their students freedom to read whichever books they choose. For the purpose of this study, teachers did not change their already established policies in regard to reading level ranges.

Incentives. Historically, at the school in which the study took place, some teachers record AR performance in their gradebooks. Those grades are then factored into their overall nine-week average. Some teachers choose to implement AR without giving grades for performance. For the purpose of this research study, all teachers continued to practice the same grading procedures and implement the same incentives that they used prior to the start of the study.

Post-assessments. Upon the conclusion of the six-week research period, post-tests were administered. Students completed another ERAS and an easyCBM progress monitoring assessment. The researcher transferred the survey results to the master data chart. Teachers were asked to complete the posttest portion of the easyCBM data chart, as well as indicate whether or not each student met or exceeded their AR goal on their demographic charts.

Available Materials

It is a requirement of the district for all teachers to use a research-based program to guide their ELA instruction. The district purchased the McGraw-Hill Wonders reading basal program for all grade levels. Grade 5 teachers use the Wonders program as the primary resource used to guide their ELA instruction. Grade 4 teachers opted to purchase the Scholastic Storyworks program at a cost of $7.00 per student. Grade 4 teachers still used the basal at times; however, most of their focus was geared towards the Storyworks series. The Accelerated Reader program was used only as a supplemental resource.

Students attended their library related arts class every eight school days. On these days, students could check-out up to two books to take home with them. Because students often finished and tested over their books before it was time for their class to

have library again, the librarian offered a “flex check-out” time slot of thirty minutes a day during which students could quickly return their books and check-out new ones. In addition to books available in the school library, students also had access to a library of books in their classrooms. Students could even read books from home as long as they were AR books.

Statistical Analysis

Once all data was collected, the information was entered into Survey Monkey. Results were exported to SPSS and statistical analyses were conducted.

By research question, the statistical procedures conducted are described below.

Research Question 1: Goal Achievement

Controlling for prior achievement in reading as measured by the state’s standardized test (TCAP), is there a significant difference in the number of students meeting their Accelerated Reader goals by their gender, grade level, and experimental condition as TSAR or SSAR?

Given the dichotomous nature of the outcome variable--that is a student meeting or not meeting his or her Accelerated Goals (AR) goals—a hierarchical logistic regression that controlled for the student’s prior achievement level was determined to be the most efficient procedure for examining the impact of these variables individually and in concert with one another.

Research Question 2: Reading Growth

Controlling for prior achievement in reading as measured by the state’s standardized test (TCAP) and an easyCBM pretest assessment, is there a significant

difference in students' posttest reading achievement on an easyCBM posttest assessment by their gender, grade level, and experimental condition as TSAR or SSAR?

In light of the continuous nature of the outcome variable—that, is the student's percent correct on a reading achievement posttest—a hierarchical ordinary least squares (OLS) regression that controlled not only for the student's percent correct on a pretest of reading achievement but also for the student's reading achievement on the state's standardized test (TCAP) was determined to be the most efficient procedure for examining whether the source of goal selection made a difference in the student's posttest score in the presence of his/her gender and grade level.

Research Question 3: Recreational Reading Attitudes

Controlling for prior achievement in reading as measured by the state's standardized test (TCAP) and a pretest assessment of attitudes towards recreational reading as measured by the Elementary Attitudes towards Reading Survey (ERAS), is there a significant difference in students' posttest attitudes towards ERAS recreational reading by their gender, grade level, and experimental condition as TSAR or SSAR?

Using percentile rank representations of the recreational ERAS scores and controlling for both prior academic achievement and a pretest measure of the outcome, a hierarchical OLS multiple regression was conducted on students' posttest attitudes.

Research Question 4: Academic Reading Attitudes

Controlling for prior achievement in reading as measured by the state's standardized test (TCAP) and a pretest assessment of attitudes towards academic reading as measured by the Elementary Attitudes towards Reading Survey (ERAS), is there a

significant difference in students' posttest attitudes towards ERAS academic reading by their gender, grade level, and experimental condition as TSAR or SSAR?

Using percentile rank representations of the academic ERAS scores and controlling for both prior academic achievement and a pretest measure of the outcome, a hierarchical OLS multiple regression was conducted on students' posttest attitudes.

Chapter 4

Results

The purpose of this study was to compare the impact of Teacher-Set Accelerated Reader goals (TSAR) and Student-Set Accelerated Reader goals (SSAR) on fourth- and fifth-grade students' reading comprehension growth and attitudes towards recreational and academic reading. Specific research questions that derive from this overall purpose are as follows:

Research Question 1: Goal Achievement

Controlling for prior achievement in reading as measured by the state's standardized test (TCAP), is there a significant difference in the number of students meeting their Accelerated Reader goals by their gender, grade level, and experimental condition as TSAR or SSAR?

Research Question 2: Reading Growth

Controlling for prior achievement in reading as measured by the state's standardized test (TCAP) and an easyCBM pretest assessment, is there a significant difference in students' posttest reading achievement on an easyCBM posttest assessment by their gender, grade level, and experimental condition as TSAR or SSAR?

Research Question 3: Recreational Reading Attitudes

Controlling for prior achievement in reading as measured by the state's standardized test (TCAP) and a pretest assessment of attitudes towards recreational reading as measured by the Elementary Attitudes towards Reading Survey (ERAS), is there a significant difference in students' posttest attitudes towards ERAS recreational reading by their gender, grade level, and experimental condition as TSAR or SSAR?

Research Question 4: Academic Reading Attitudes

Controlling for prior achievement in reading as measured by the state's standardized test (TCAP) and a pretest assessment of attitudes towards academic reading as measured by the Elementary Attitudes towards Reading Survey (ERAS), is there a significant difference in students' posttest attitudes towards ERAS academic reading by their gender, grade level, and experimental condition as TSAR or SSAR?

Following a brief description of the study's participants, the results of statistical analyses pertinent to each of the four research questions will be presented. The chapter will conclude with a brief summary of the findings.

Description of Sample

Although some of their demographic data was incomplete, 163 students at Grade 4 (69.9%) and Grade 5 (29.4%) were observed to have participated in this study in total (Table 1). While female students (55.2%) were seen to have slightly outnumbered males (44.9), the distributions of other respondent characteristics were more skewed. By ethnicity, almost 80% of those sampled were Caucasian (79.1%), with the remaining 20% of the sample made up of African American (13.6%) students and students of "other" ethnicities (7.4%). With no TCAP data available on the prior achievement levels of about 6% of the sample, about two-thirds of the students were recorded as having scored at the "proficient" (45.4%) or "advanced" (20.2%) levels on the state's standardized test (TCAP) in reading, with only about one-third of the sample scoring at "basic" (24.5%) and "below basic" (3.7%) levels. In proportions correlative to their prior achievement, students were also noted as having met (62.6%) or not met (37.4%) their "AR Goals",

Table 1

Demographic Characteristics of Sampled Students

Student Characteristic	*f*	%
Gender		
Male	73	44.8
Female	90	55.2
Grade Level		
Grade 4	114	69.9
Grade 5	48	29.4
Not Reported	1	.6
	162	
Ethnicity		
Caucasian	129	79.1
African-American	22	13.5
Other	12	7.4
Classification		
Regular Education	138	84.7
Gifted	16	9.8
Learning Lab	9	5.5
Prior Achievement Level		
Below Basic	6	3.7
Basic	40	24.5
Proficient	74	45.4
Advanced	33	20.2
No data	10	6.1
Met AR Goals		
Yes	102	62.6
No	61	37.4
Experimental Group		
Student-Selected Goals	99	60.7
Teacher Selected Goals	64	39.3

with roughly 60% of the aforementioned being "student-selected" (60.7%) and about 40% being "teacher selected" (39.3%).

Research Question 1

Given the dichotomous nature of the outcome variable--that is a student meeting or not meeting his or her Accelerated Goals (AR) goals—a hierarchical logistic regression that controlled for the student's prior achievement level was determined to be the most efficient procedure for examining the impact of these variables individually and in concert with one another.

As seen in Tables 3 and 4, statistical analyses via the chi-square test of independence and the test for the non-zero strength of a correlation indicated significant relationships between three of four student intake variables and whether or not a student's AR goals were met. As might be expected, a student's prior achievement level on the state's standardized test (TCAP) as "below basic" (1), "basic" (2), "proficient" (3), or "advanced" (4), was observed to have the strongest relationship with student's not achieving (coded as 0) or achieving (coded as 1) his or her "AR goals" (r =.38). At the same time, positive and statistically significant relationships were observed between the student's grade level as Grade 4 (coded as 0) or Grade 5 (coded as 1) and the student's achievement of AR goals (r = .19) and the provision for the participant's choice of reading goal as either student-selected (SSAR, coded as 0) or teacher-selected (TSAR, coded as 1) and the student's achievement of AR goals (r =.30). While there were few other statistically significant correlations among the five variables of interest, the one between Grade level and Choice of Goal –both of which correlated significantly with AR

goal achievement—suggests the possibility of an interaction of these two variables and the need for a more complex statistical analysis.

Table 2

Frequencies for Student Demographic Variables as a Function of Meeting AR Goals

Predictor Variable				Test of Relationship		
Gender (% Met Goals)				χ^2	*p*	ϕ
Male	60.3	Female	64.4	0.30	0.58	.043
Grade Level (% Met Goals)				χ^2	*p*	ϕ
Fourth	56.1	Fifth	77.1	6.31	0.01	.197
Goals (% Met Goals)				χ^2	*p*	ϕ
Student	51.5	Teacher	79.7	13.17	0.00	.284
Prior Achievement (% Met Goals)				χ^2	*p*	ϕ
Basic	39.1	Proficient	72.9	22.41	0.00	.383

To address this analytic requirement, a hierarchical logistic regression was conducted that employed a student's prior achievement and his or her gender, grade level, and group status (as having selected or not selected the reading goal) to predict the odds of his or her achieving AR goals (Table 4). Consistent with the results of the correlational and chi-square analyses the genders appeared to be equally likely to have achieved their goals. However, it also seemed to be the case that, having taken into account prior achievement, AR goal attainment was more likely among Grade 5 students as well as more likely among students' whose teachers selected their goals for them. Inspection of

the outcomes for the third block of variables entered into the analysis suggests that the inclusion of a student's treatment "Group" not only enhances the overall fit of the model ($\chi^2(3) = 28.67$, $p < .001$ compared to $\chi^2(4) = 41.34$, $p < .001$), it also significantly contributes to the proportion of variance explained given by the R^2 statistics (specifically, Cox and Snell $R^2 = .17$ and Nagelkerke $R^2 = .23$ without the Group designation and Cox and Snell $R^2 = .24$ and Nagelkerke $R^2 = .32$ with the Group designation).

Table 3

Intercorrelations for Meeting AR Goals and Student Demographic Variables

Measure	1	2	3	4	5
1. AR Goal Met (0= No, 1 = Yes)	--	0.38**	0.07	0.19*	0.30**
2. TCAP Proficiency Level (1 = Below Basic, 2 = Basic, 3 = Proficient, 4 = Advanced)		--	0.11	0.04	-0.01
3. Gender (0 = Male 1 = Female)			--	0.03	-0.02
4. Grade Level (0 = Grade 4, 1 = Grade 5)				--	0.27**
5. Source of Goals (0 = Student, 1 = Teacher)					--

* $p < .05$ (2-tailed).** $p < .01$ (2-tailed).

Table 4

Summary of Hierarchical Logistic Regression Analysis Predicting Goal Attainment in Reading

Predictor	*B*	*S.E.*	*OR*	95% CI	Wald Statistic	*p*
Model Fit: χ^2 (1) = 22.87, p < .001; Block $\chi 2$ (1) = 22.87, p < .001; Cox and Snell R^2 = .14, Nagelkerke R^2 = .19						
Prior Achievement	1.11	0.26	3.04	[1.84, 5.02]	18.88	0.00
Model Fit: χ^2 (2) = 28.67, p < .001; Block $\chi 2$ (2) = 5.81, p =.06; C&S R^2 = .17, Nagelkerke R^2 = .23						
Prior Achievement	1.13	0.27	3.10	[1.84, 5.22]	18.15	0.00
Gender	0.14	0.37	1.15	[0.56, 2.38]	0.14	0.71
Grade	0.98	0.43	2.66	[1.15, 6.15]	5.24	0.02
Model Fit: χ^2 (4) = 41.34, p < .001; Block $\chi 2$ (1) = 12.67, p < .001; Cox and Snell R^2 = .24, Nagelkerke R^2 = .32						
Prior Achievement	1.23	0.28	3.41	[1.97, 5.89]	19.32	0.00
Gender	0.23	0.39	1.25	[0.58, 2.69]	0.34	0.56
Grade	0.62	0.45	1.86	[0.76, 4.52]	1.85	0.17
Group (Grp)	1.45	0.43	4.28	[1.84, 9.93]	11.44	0.00
Model Fit: χ^2 (6) = 53.88, p < .001; Block $\chi 2$ (3) =12.54, p < .01; Cox and Snell R^2 = .30, Nagelkerke R^2 = .41						
Prior Achievement	1.38	0.30	3.99	[2.2, 7.25]	20.72	0.00
Gender	-0.41	1.22	0.67	[0.06, 7.29]	0.11	0.74
Grade	-4.45	1.68	0.01	[0.00, 0.31]	7.03	0.01
Group (Grp)	-3.77	1.98	0.02	[0.00, 0.31]	3.65	0.06
Grp X Gender	0.42	0.89	1.52	[0.27, 8.66]	0.23	0.63
Grp X Grade	3.76	1.30	42.95	[3.39, 544.98]	8.41	0.00

(Table continues)

Table 4 (Continued)

Predictor	*B*	*S.E.*	*OR*	95% CI	Wald Statistic	*p*
Model Fit: χ^2 (7) = 55.66, p < .001; Block $\chi 2$ (1) = 1.78, p = .182; Cox and Snell R^2 = .31, Nagelkerke R^2 = .42						
Prior Achievement	1.44	0.31	4.20	[2.27, 7.77]	20.89	0.00
Gender	-0.61	1.26	0.54	[0.05, 6.4]	0.24	0.63
Grade	-5.04	1.88	0.01	[0.00, 0.26]	7.16	0.01
Group (Grp)	-2.46	2.27	0.09	[0.00, 7.26]	1.18	0.28
Grp X Gender	-0.78	1.28	0.46	[0.04, 5.67]	0.37	0.54
Grp X Grade	2.46	1.50	11.76	[0.62, 222.57]	2.70	0.10
Grp X Gender X Grade	1.17	0.95	3.24	[0.5, 20.84]	1.53	0.22

Anticipated by the previously noted correlation of Grade Level and Group, the creation and addition of the two-way interaction of these variables proved to be highly statistically significant (Wald statistic = 8.41, $p < .001$), once again improving the overall fit of the model ($\chi^2(6) = 53.88$, $p < .001$) and markedly increasing the proportion of variance explained (Cox and Snell $R^2 = .30$, Nagelkerke $R^2 = .41$). Creating four categories by crossing a student's grade level with his/her treatment group and then graphing the percentages meeting AR Goals suggests a near equivalent impact of goal choice on meeting one's goals at Grade 4 but a decidedly different one at Grade 5 (Figure 1). At the latter grade, almost 100% of students who had the teacher select their goals achieved them, compared to about 66% of students who selected their own goals. To confirm the accuracy of these observations, separate logistic regressions were conducted on the two grade levels. As presented in Table 5 and as anticipated, no effect of treatment was noted for Grade 4 (Wald statistic = 0.04, $p = .85$), but was observed for Grade Five (Wald statistic = 10.00, $p < .001$).

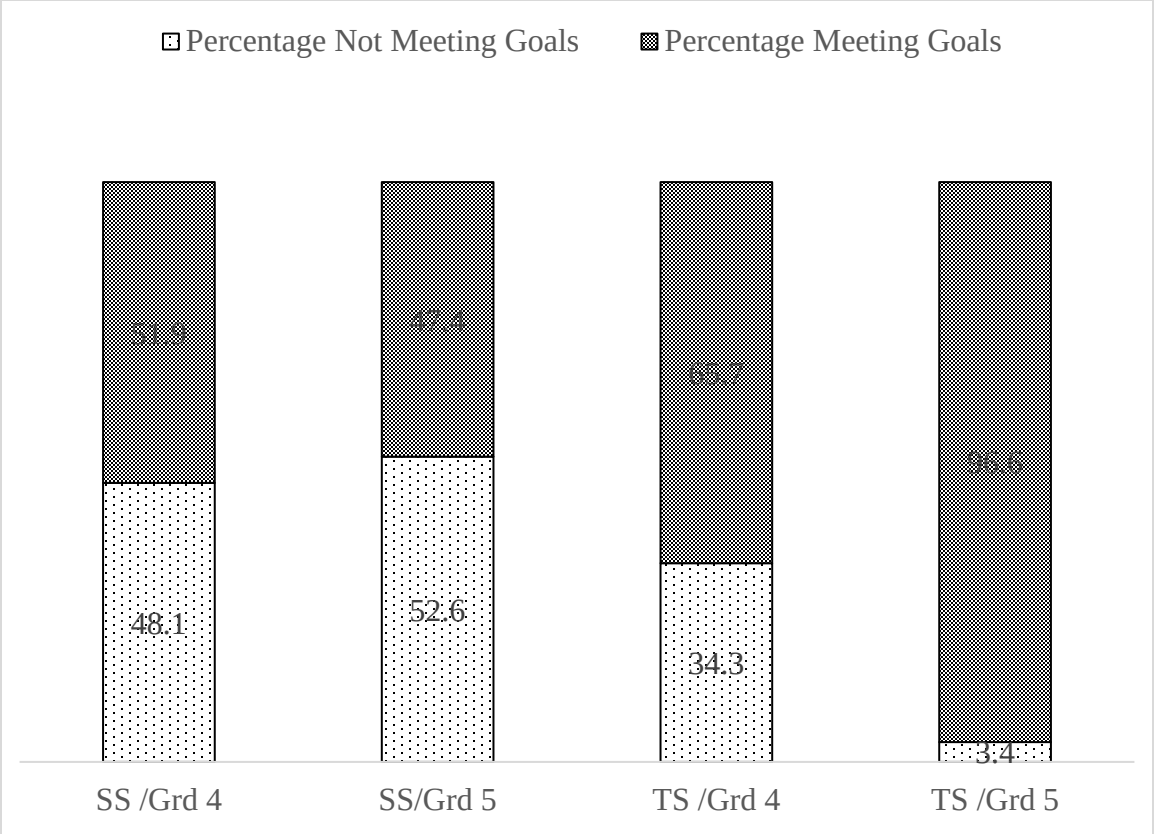


Figure 1. Percentage of Students Meeting Goals by Group and Grade Level

Table 5

Hierarchical Logistic Regression Follow-up Analysis Predicting Goal Attainment in Reading, Separated by Student Grade Level

Predictor	*B*	*S.E.*	*OR*	95% CI	Wald Statistic	*p*
			Grade Four Only			
Prior Achievement	1.36	0.34	3.89	[2.01, 7.51]	16.354	0.00
Gender	-0.05	0.45	0.95	[0.396, 2.29]	.012	0.91
Group (Grp)	0.60	0.47	1.82	[0.717, 4.59]	1.584	0.21
Prior Achievement	1.35	0.34	3.87	[2, 7.49]	16.16	0.00
Gender	-0.32	1.33	0.73	[0.053, 9.89]	0.06	0.81
Group (Grp)	0.29	1.51	1.33	[0.07, 25.66]	0.04	0.85
Grp X Gender	0.21	0.95	1.23	[0.19, 7.91]	0.05	0.83
			Grade Five Only			
Prior Achievement	1.76	0.81	5.83	[1.2, 28.43]	4.76	0.03
Gender	1.22	1.09	3.37	[0.4, 28.54]	1.25	0.26
Group (Grp)	4.90	1.55	134.55	[6.49, 2789.22]	10.04	0.00
Prior Achievement	1.89	0.85	6.59	[1.25, 34.7]	4.96	0.03
Gender	-18.10	8557.98	0.00	[0.00, 0.00]	0.00	0.99
Group (Grp)	-14.75	8557.98	0.00	[0.00, 0.00]	0.00	0.99
Grp X Gender	18.74	8557.98	0.00	[0.00, 0.00]	0.00	0.99

Research Question 2

In light of the continuous nature of the outcome variable—that, is the student's percent correct on a reading achievement posttest—a hierarchical ordinary least squares (OLS) regression that controlled not only for the student's percent correct on a pretest of reading achievement but also for the student's reading achievement on the state's standardized test (TCAP) was determined to be the most efficient procedure for

examining whether the source of goal selection made a difference in the student's posttest score in the presence of his/her gender and grade level. Inspection of the means in Table 6 suggests only minor differences in the pre- and posttest percentages of correct answers on the easyCBM assessments but reveals some interesting trends. By gender, females appeared on average to have gained less than one percent correct on the posttest, given their pretest scores, while males on average appeared to have lost nearly one and one half percent correct. Reading performance at Grade 4 appeared to have waned slightly, with those students' scores declining, while at Grade Five reading performance seems to have waxed, with those students showing an average gain in their pretest to posttest percent correct. However, perhaps the most dramatic differences in the pairs of scores was by treatment group: where students who were allowed to choose their own goals gained about a percentage point, students who had their goals chosen for them lost more than two percentage points. While the matrix of correlations presented in Table 7 does not appear directly to link group membership either higher pretest easyCBM scores (r = .06) or higher posttest easyCBM scores (r = -.03), the link may be indirect, residing in group membership's relationship, for example, with grade level (r = .27) and that variable's relationship with higher scores on both the pretest (r = .34) and the posttest (r = .40) and the robust relationship between pretest and posttest scores (r = .59).

Table 6

Means and Standard Deviations on Pretest and Posttest Reading Achievement Measures by Student Demographic Variables

Measure: Easy CBM	Pretest		Posttest	
	M	*SD*	*M*	*SD*
Prior Achievement				
Lower	59.56	18.02	62.67	15.10
Higher	71.12	14.67	69.02	16.19
Grade Level				
Grade 4	63.98	13.99	63.14	12.94
Grade 5	76.46	18.62	77.08	18.56
Gender				
Male	65.42	18.13	64.03	17.35
Female	69.55	14.86	69.94	14.59
Goal Selection				
Student	66.91	16.14	67.78	14.47
Teacher	68.91	17.03	66.56	18.41

Table 7

Intercorrelations for Reading Achievement Posttest Scores, Measures of Prior Achievement, and Student Demographic Variables

Variable	1	2	3	4	5	6
1. TCAP Proficiency Level (1 = Below Basic, 2 = Basic, 3 = Proficient, 4 = Advanced)	--	0.39**	0.12	0.05	-0.01	0.32**
2. Easy CBM Pretest % Correct		--	0.14	0.34**	0.06	0.59**
3. Gender (0 = Male 1 = Female)			--	0.03	-0.01	0.18*
4. Grade Level (0 = Grade 4, 1 = Grade 5)				--	0.27**	0.40**
5. Source of Goals (0 = Student, 1 = Teacher)					--	-0.03
6. Easy CBM Posttest % Correct						--

* $p < .05$ (2-tailed).** $p < .01$ (2-tailed).

Table 8

Summary of Hierarchical OLS Regression Analysis Predicting Posttest Reading Achievement Scores

Predictor	*b*	*S.E.*	*β*	95% CI	*t*	*p*
Model fit: F (1, 150) = 16.53, p < .001; F Change: F (1, 150) =16.53, p < .001, R^2 = .10						
Prior Achievement	6.43	1.58	0.32	[3.3, 9.55]	4.07	0.000
Model fit: F (2, 149) = 41.03, p < .001); F Change: F (1, 149) =59.13, p < .001, R^2 = .36)						
Prior Achievement	2.02	1.46	0.10	[-0.86, 4.91]	1.39	0.168
Pretest % Correct	0.53	0.07	0.55	[0.40, 0.67]	7.69	0.000
Model fit: F (4, 147) = 25.96, p < .001; F Change: F (2, 147) =7.36, p < .01, R^2 = .41)						
Prior Achievement	2.37	1.41	0.12	[-0.42, 5.16]	1.68	0.095
Pretest % Correct	0.44	0.07	0.45	[0.30, 0.58]	6.09	0.000
Gender	3.19	2.06	0.10	[-0.89, 7.26]	1.55	0.124
Grade	8.27	2.34	0.24	[3.65, 12.9]	3.53	0.001
Model fit: F (5, 146) = 21.99, p < .001; F Change: F (1, 146) = 3.98, p < .05, R^2 = .43)						
Prior Achievement	2.35	1.40	0.12	[-0.41, 5.11]	1.68	0.095
Pretest % Correct	0.43	0.07	0.45	[0.29, 0.57]	6.11	0.000
Gender	3.13	2.04	0.10	[-0.90, 7.16]	1.53	0.127
Grade	9.51	2.40	0.27	[4.77, 14.25]	3.96	0.000
Group (Grp)	-4.20	2.11	-0.13	[-8.37, -0.04]	-2.00	0.048

(Table continues)

Table 8 (Continued)

Predictor	*b*	*S.E.*	*β*	95% CI	*t*	*p*
Model fit: F (7, 144) = 16.23, p < .001; F Change: F (2, 144) = 1.48, p =.231, R^2 = .44)						
Prior Achievement	2.28	1.39	0.11	[-0.47, 5.04]	1.64	0.104
Pretest % Correct	0.42	0.07	0.43	[0.28, 0.56]	5.77	0.000
Gender	-5.70	6.13	-0.18	[-17.82, 6.42]	-0.93	0.354
Grade	15.35	7.66	0.44	[0.20, 30.49]	2.00	0.047
Group (Grp)	-8.92	8.86	-0.27	[-26.44, 8.6]	-1.01	0.316
Grp X Gender	6.30	4.08	0.42	[-1.76, 14.36]	1.54	0.125
Grp X Grade	-3.81	4.64	-0.26	[-12.98, 5.36]	-0.82	0.413
Model fit: F (8, 143) = 14.31, p < .001; F Change: F (1, 143) =0.90, p = .344, R^2 = .45)						
Prior Achievement	2.45	1.41	0.12	[-0.33, 5.22]	1.74	0.084
Pretest % Correct	0.41	0.07	0.42	[0.27, 0.56]	5.59	0.000
Gender	-4.36	6.29	-0.14	[-16.8, 8.08]	-0.69	0.490
Grade	15.62	7.67	0.45	[0.46, 30.78]	2.04	0.044
Group (Grp)	-1.75	11.65	-0.05	[-24.77, 21.28]	-0.15	0.881
Grp X Gender	1.72	6.32	0.11	[-10.78, 14.21]	0.27	0.786
Grp X Grade	-8.13	6.50	-0.56	[-20.98, 4.72]	-1.25	0.213
Grp X Gender X Grade	2.71	2.85	0.35	[-2.93, 8.35]	0.95	0.344

In analyzing these data using a hierarchical OLS regression procedure, the results presented in Table 8 suggest that the model that best predicts students' easyCBM posttest scores is the Block 4 iteration that explains about 43% of the variance in the outcome and includes all three of the previously mentioned variables: namely, easyCBM pretest score ($\beta = 0.45$, $t = 6.11$, $p < 001$), grade level, positively signed and favoring Grade 5 ($\beta = 0.27$, $t = 3.96$, $p < 001$), and group membership, negatively signed and favoring student-selected goals ($\beta = –0.13$, $t = 2.00$, $p < 05$). When the other variables in the

model are included, neither a student's gender nor his/her prior achievement proved to be significant predictors of easyCBM posttest scores, and none of the interaction terms contributed any precision to the findings over and above these main effects.

Research Question 3

Using percentile rank representations of the recreational ERAS scores and controlling for both prior academic achievement and a pretest measure of the outcome, a hierarchical OLS multiple regression was conducted on students' posttest attitudes. Inspection of the pairs of means for the recreational measure suggests a general tendency for scores to decline across all students over time, but this decline seems somewhat smaller with respect to the scores of students who self-selected their reading goals (Table 9). In addition to this potential difference by treatment group, the matrix of correlations outlined in Table 10 would also seem to suggest that gender may be a significant predictor of the outcome as that variable correlates both with the ERAS recreational pretest measure (r = .30) as well as with ERAS recreational posttest measure (r = .19). The positively signed correlations indicate that females have higher scores on both pre- and posttest outcomes. Prior reading achievement also appears to be positively correlated with both pretest (r = .27) and posttest (r = .27) ERAS recreational reading measures.

Table 9

Means and Standard Deviations on Pretest and Posttest Attitudes towards Recreational Reading Measures by Student Demographic Variables

Measure: ERAS Recreational	Pretest		Posttest	
	M	*SD*	*M*	*SD*
Prior Achievement				
Lower	41.40	24.25	33.42	25.17
Higher	56.69	26.79	44.68	27.57
Grade Level				
Grade 4	50.69	27.94	40.03	25.99
Grade 5	55.98	24.14	45.02	31.18
Gender				
Male	44.24	25.31	37.03	27.17
Female	58.53	26.51	45.42	27.53
Goal Selection				
Student	50.74	27.20	44.30	28.08
Teacher	54.30	26.40	37.56	26.55

Table 10

Intercorrelations for Attitudes towards Recreational Reading Posttest Scores, a Measure of Prior Achievement, Attitudes towards Recreational Reading Pretest Scores, and Student Demographic Variables

Measure	1	2	3	4	5	6
1. TCAP Proficiency Level (1 = Below Basic, 2 = Basic, 3 = Proficient, 4 = Advanced)	--	0.27**	0.12	0.05	-0.01	0.27**
2. ERAS Recreational Pretest Percentile		--	0.30**	0.10	0.07	0.69**
3. Gender (0 = Male 1 = Female)			--	0.03	0.00	0.19*
4. Grade Level (0 = Grade 4, 1 = Grade 5)				--	.27**	0.06
5. Source of Goals (0 = Student, 1 = Teacher)					--	-0.12
6. ERAS Recreational Posttest Percentile						--

* $p < .05$ (2-tailed).** $p < .01$ (2-tailed).

As seen in Table 11 for the Block 1 OLS regression statistics, prior reading achievement was initially a statistically significant predictor of students' posttest ERAS recreational reading percentiles ($\beta = 0.27$, $t = 3.39$, $p < .001$) but became statistically non-significant in Block 2 ($\beta = 0.09$, $t = 1.40$, $p = .162$) once students' ERAS pretest percentiles were added to the model ($\beta = 0.67$, $t = 7.69$, $p < .001$). With neither gender ($\beta = -0.02$, $t = -0.29$, $p = .768$). nor grade level ($\beta = 0.00$, $t = -0.08$, $p = .940$) proving to be statistically significantly predictors of the ERAS recreational reading posttest scores, the model fit statistics shown for Block 3 indicated no improvement in the overall model fit

to the data and nothing added to the proportion of variance explained in the ERAS posttest scores over and above that provided by the ERAS pretest scores (*F* Change = $F(2, 145) = 0.046$, $p = .96$, $R^2 = .47$). However, when the effect of students' membership in either the SSAR or TSAR group was isolated in Block 4, SSAR membership proved to be highly predictive of more positive attitudes towards recreational reading ($\beta = -.018$, $t = -2.96$, $p = .004$), after taking into account students' prior reading achievement, pretest ERAS scores, demographic characteristics, and possible interactions of these variables. Together, students' ERAS pretest scores in recreational reading and their group membership explain about half of the variation in their ERAS posttest scores in recreational reading.

Table 11

Summary of Hierarchical OLS Regression Analysis Predicting Posttest Attitudes towards Recreational Reading

Predictor	*b*	*S.E.*	*β*	95% CI	*t*	*p*
Model fit: F (1, 148) =11.51, p < .01; F Change: F (1, 148) =11.51, p < .01, R^2 = .07)						
Prior Achievement	9.23	2.72	0.27	[3.85, 14.61]	3.39	0.001
Model fit: F (2, 147) = 66.67, p < .001); F Change: F (1, 147) = 116.82, p < .001, R^2 = .48)						
Prior Achievement	2.98	2.12	0.09	[-1.21, 7.16]	1.40	0.162
Pretest Percentile	0.68	0.06	0.67	[0.55, 0.8]	10.81	0.000
Model fit: F (4, 145) = 33.91, p < .001; F Change: F (2, 145) =0.046, p =.96, R^2 = .47)						
Prior Achievement	3.01	2.14	0.09	[-1.22, 7.23]	1.41	0.161
Pretest Percentile	0.68	0.07	0.67	[0.55, 0.81]	10.36	0.000
Gender	-1.01	3.42	-0.02	[-7.78, 5.76]	-0.29	0.768
Grade	-0.27	3.52	0.00	[-7.22, 6.68]	-0.08	0.940
Model fit: F (5, 144) =30.32, p < .001; F Change: F (1, 144) = 8.73, p < .01, R^2 = .50)						
Prior Achievement	2.79	2.08	0.08	[-1.33, 6.9]	1.34	0.183
Pretest Percentile	0.69	0.06	0.68	[0.57, 0.82]	10.80	0.000
Gender	-1.19	3.34	-0.02	[-7.79, 5.4]	-0.36	0.721
Grade	2.52	3.55	0.04	[-4.5, 9.54]	0.71	0.479
Group (Grp)	-9.85	3.33	-0.18	[-16.44, -3.26]	-2.96	0.004

(Table continues)

Table 11 (Continued)

Predictor	*b*	*S.E.*	*β*	95% CI	*t*	*p*
Model fit: F (7, 142) = 22.07, p < .001; F Change: F (2, 142) = 1.21, p =.301, R^2 = .50)						
Prior Achievement	2.60	2.09	0.08	[-1.53, 6.72]	1.24	0.216
Pretest Percentile	0.69	0.06	0.68	[0.56, 0.81]	10.58	0.000
Gender	-3.23	9.92	-0.06	[-22.83, 16.37]	-0.33	0.745
Grade	19.27	11.45	0.33	[-3.36, 41.89]	1.68	0.095
Group (Grp)	2.24	14.09	0.04	[-25.61, 30.1]	0.16	0.874
Grp X Gender	1.61	6.51	0.06	[-11.25, 14.48]	0.25	0.805
Grp X Grade	-10.99	7.13	-0.45	[-25.07, 3.1]	-1.54	0.125
Model fit: F (8, 141) = 19.24, p < .001; F Change: F (1, 141) =0.253, p = .616, R^2 = .50)						
Prior Achievement	2.70	2.10	0.08	[-1.47, 6.86]	1.28	0.202
Pretest Percentile	0.68	0.07	0.68	[0.56, 0.81]	10.50	0.000
Gender	-2.04	10.22	-0.04	[-22.24, 18.16]	-0.20	0.842
Grade	19.29	11.48	0.33	[-3.4, 41.97]	1.68	0.095
Group (Grp)	8.26	18.51	0.15	[-28.33, 44.84]	0.45	0.656
Grp X Gender	-2.26	10.10	-0.09	[-22.23, 17.7]	-0.22	0.823
Grp X Grade	-14.52	10.02	-0.59	[-34.32, 5.29]	-1.45	0.149
Grp X Gender X Grade	2.26	4.48	0.17	[-6.61, 11.12]	0.50	0.616

Research Question 4

With respect to ERAS academic reading by the variables examined in this study, pretest to posttest score declines are generally noted (Table 12), with comparatively smaller ones observed for the experimental group linked to student-selected goals as opposed to its counterpart linked to teacher-selected goals. Interestingly, inspection of the correlation matrix presented in Table 13 indicates that a disposition towards academic reading does not appear to be linked to students' prior achievement, either with respect to either their pretest ERAS percentiles or their posttest ERAS percentiles (both $r = .11$ and statistically non-significant). While the group linked to teacher-selected goals appears to have higher pretest attitudes towards academic reading than their counterparts ($r = .16$, $p < .05$) and grade level appears to be linked to teacher-selected goals ($r = .27$, $p < .01$, with Grade Five favored) there appear to be no relationships among the other variables aside from the expected one between the pretest and posttest ERAS outcomes themselves ($r = .64$).

Table 12

Means and Standard Deviations on Pretest and Posttest Attitudes towards Academic Reading Measures by Student Demographic Variables

Measure: ERAS Academic	Pretest		Posttest	
	M	*SD*	*M*	*SD*
Prior Achievement				
Lower	57.51	24.45	55.07	27.62
Higher	64.66	23.47	58.50	28.29
Grade Level				
Grade 4	61.03	24.79	56.37	27.26
Grade 5	66.79	21.66	60.29	30.33
Gender				
Male	61.86	23.31	54.71	29.94
Female	63.57	24.49	60.28	26.66
Goal Selection				
Student	60.16	24.36	58.76	27.56
Teacher	66.92	22.77	56.25	29.40

Table 13

Intercorrelations for Attitudes towards Academic Reading Posttest Scores, a Measure of Prior Achievement, Attitudes towards Academic Reading Pretest Scores, and Student Demographic Variables

Measure	1	2	3	4	5	6
1. TCAP Proficiency Level (1 = Below Basic, 2 = Basic, 3 = Proficient, 4 = Advanced)	--	0.11	0.12	0.05	-0.01	0.11
2. ERAS Academic Pretest Percentile		--	0.05	0.13	0.16*	0.64**
3. Gender (0 = Male 1 = Female)			--	0.03	0.00	0.15
4. Grade Level (0 = Grade 4, 1 = Grade 5)				--	0.27**	0.05
5. Source of Goals (0 = Student, 1 = Teacher)					--	-0.04
6. ERAS Academic Posttest Percentile						--

* $p < .05$ (2-tailed).** $p < .01$ (2-tailed).

As with the OLS regression analysis of students' attitudes towards recreational reading, the summary statistics presented in Table 14 for the OLS regression analysis of their academic reading attitudes indicate that the best predictors of the posttest outcome are their ERAS pretest scores ($\beta = 0.66$, $t = 10.35$, $p < .001$) and their membership in the SSAR experimental group ($\beta = -0.15$, t = -2.23, p < .027), controlling for the other variables at the Block 4 level of the statistical modelling procedure. However, when the interaction terms are created and added to the model in Blocks 5 and 6, statistical significance is observed for the two-way interaction of Group and Grade Level (β = -

0.71, t = -2.30, p =.023). Presented in Figure 2, a graph of the students' grade level by their experimental group suggests that the interaction effect owes to the positive difference between pretest and posttest scores for ERAS academic reading that is seen for the SSAR group at Grade 5 only. Further warranting this a conclusion is the follow-up regression analyses separated by grade level and presented in Table 15. Therein, no effect for the group variable is observed for Grade 4 (β = -0.04, t = -0.56, p = .577), but is seen for Grade 5 (β = -0.34, t = -2.94, p = .005), the negatively-signed value indicating higher values for the SSAR group.

Table 14

Summary of Hierarchical OLS Regression Analysis Predicting Posttest Attitudes towards Academic Reading

Predictor	*b*	*S.E.*	*β*	95% CI	*t*	*p*
Model fit: F (1, 148) = 1.83, p =.178; F Change: F (1, 148) =1.83, p -.178, R^2 = .01)						
Prior Achievement	3.90	2.89	0.11	[-1.8, 9.61]	1.35	0.178
Model fit: F (2, 147) = 51.87, p < .001); F Change: F (1, 147) = 100.69, p < .001, R^2 = .41)						
Prior Achievement	1.45	2.24	0.04	[-2.98, 5.89]	0.65	0.518
Pretest Percentile	0.75	0.07	0.64	[0.6, 0.9]	10.03	0.000
Model fit: F (4, 145) =27.03, p < .001; F Change: F (2, 145) =1.70, p =.186, R^2 = .43)						
Prior Achievement	1.05	2.25	0.03	[-3.39, 5.5]	0.47	0.640
Pretest Percentile	0.75	0.07	0.64	[0.6, 0.9]	10.00	0.000
Gender	6.26	3.56	0.11	[-0.78, 13.3]	1.76	0.081
Grade	-2.26	3.82	-0.04	[-9.81, 5.3]	-0.59	0.556
Model fit: F (5, 144) =23.22, p < .001; F Change: F (1, 144) = 4.98, p < .05, R^2 = .45)						
Prior Achievement	0.88	2.22	0.02	[-3.51, 5.27]	0.40	0.693
Pretest Percentile	0.77	0.07	0.66	[0.63, 0.92]	10.35	0.000
Gender	6.21	3.51	0.11	[-0.74, 13.15]	1.77	0.079
Grade	-0.03	3.90	0.00	[-7.74, 7.67]	-0.01	0.993
Group (Grp)	-8.22	3.68	-0.15	[-15.49, -0.94]	-2.23	0.027

(Table continues)

Table 14 (Continued)

Predictor	*b*	*S.E.*	*β*	95% CI	*t*	*p*
Model fit: F (7, 142) = 17.73, p < .001; F Change: F (2, 142) = 2.66, p =.073, R^2 = .47)						
Prior Achievement	0.59	2.20	0.02	[-3.76, 4.95]	0.27	0.788
Pretest Percentile	0.76	0.07	0.64	[0.61, 0.9]	10.20	0.000
Gender	7.73	10.50	0.14	[-13.03, 28.5]	0.74	0.463
Grade	27.17	12.44	0.45	[2.58, 51.76]	2.18	0.031
Group (Grp)	16.87	15.17	0.30	[-13.11, 46.86]	1.11	0.268
Grp X Gender	-0.88	7.00	-0.03	[-14.72, 12.96]	-0.13	0.900
Grp X Grade	-17.79	7.74	-0.71	[-33.09, -2.49]	-2.30	0.023
Model fit: F (8, 141) = 15.48, p < .001; F Change: F (1, 141) =0.328, p = .568, R^2 = .47)						
Prior Achievement	0.69	2.22	0.02	[-3.68, 5.07]	0.31	0.754
Pretest Percentile	0.76	0.07	0.64	[0.61, 0.9]	10.18	0.000
Gender	9.11	10.80	0.16	[-12.24, 30.46]	0.84	0.400
Grade	27.14	12.47	0.45	[2.49, 51.79]	2.18	0.031
Group (Grp)	24.18	19.84	0.43	[-15.05, 63.41]	1.22	0.225
Grp X Gender	-5.63	10.86	-0.22	[-27.1, 15.84]	-0.52	0.605
Grp X Grade	-22.11	10.82	-0.88	[-43.51, -0.72]	-2.04	0.043
Grp X Gender X Grade	2.78	4.86	0.21	[-6.82, 12.4]	0.57	0.568

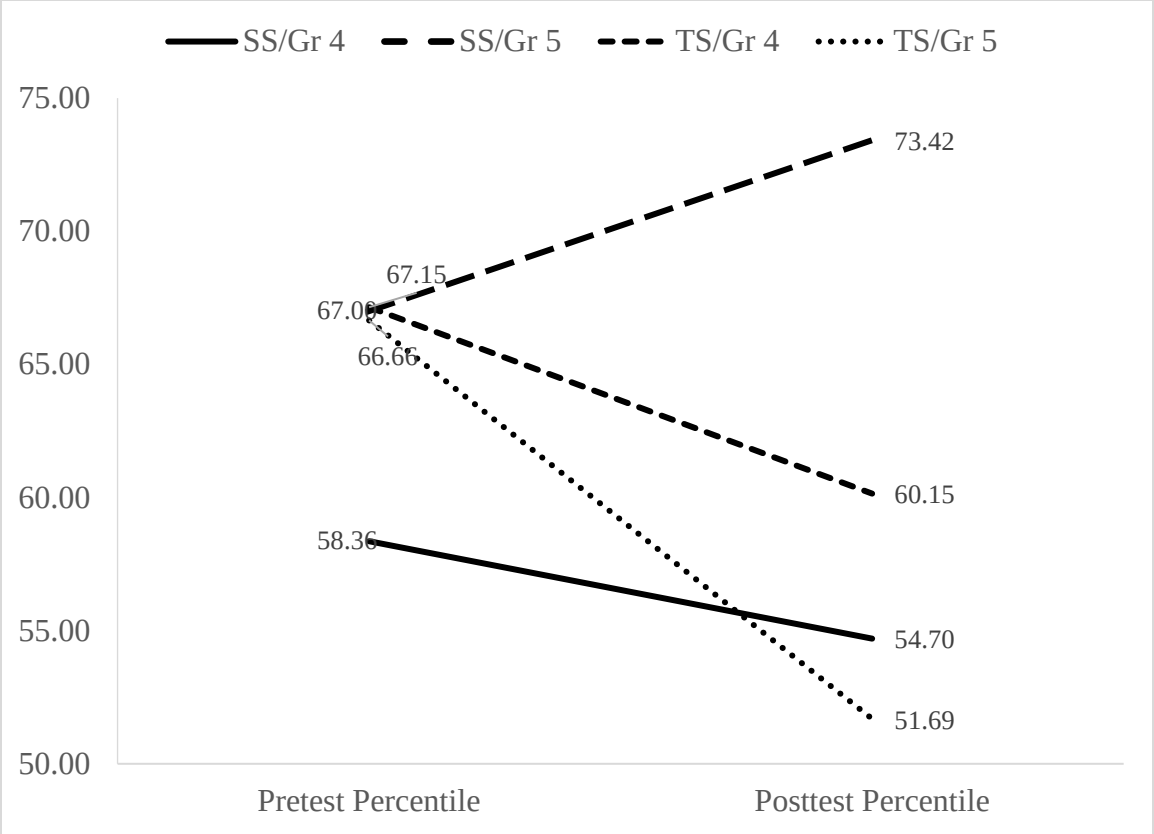


Figure 2. Pretest and Posttest Mean Attitudes towards Academic Reading by Group and Grade Level

Table 15

Hierarchical OLS Regression Follow-up Analysis Predicting Posttest Attitudes towards Academic Reading, Separated by Student Grade Level

Predictor	*b*	*S.E.*	*β*	95% CI	*t*	*p*
			Grade Four Only			
Prior Achievement	2.96	2.48	0.09	[-1.95, 7.87]	1.196	0.235
Pretest Percentile	0.75	0.08	0.68	[0.59, 0.91]	9.256	0.000
Gender	5.99	3.93	0.11	[-1.81, 13.78]	1.524	0.131
Group (Grp)	-2.34	4.19	-0.04	[-10.66, 5.97]	-0.559	0.577
Prior Achievement	3.33	2.48	0.10	[-1.6, 8.25]	1.34	0.183
Pretest Percentile	0.75	0.08	0.68	[0.59, 0.91]	9.27	0.000
Gender	20.58	11.61	0.38	[-2.45, 43.62]	1.77	0.079
Group (Grp)	14.60	13.35	0.25	[-11.9, 41.1]	1.09	0.277
Grp X Gender	-11.02	8.25	-0.41	[-27.4, 5.36]	-1.34	0.185
			Grade Five Only			
Prior Achievement	-4.74	4.48	-0.12	[-13.78, 4.3]	-1.06	0.296
Pretest Percentile	0.76	0.16	0.55	[0.43, 1.08]	4.725	0.000
Gender	6.71	7.02	0.11	[-7.47, 20.89]	0.96	0.345
Group (Grp)	-21.13	7.19	-0.34	[-35.64, -6.62]	-2.94	0.005
Prior Achievement	-4.64	4.45	-0.12	[-13.63, 4.35]	-1.04	0.303
Pretest Percentile	0.75	0.16	0.55	[0.43, 1.08]	4.72	0.000
Gender	-22.04	24.13	-0.37	[-70.78, 26.69]	-0.91	0.366
Group (Grp)	-49.05	23.54	-0.80	[-96.59, -1.51]	-2.08	0.043
Grp X Gender	17.82	14.32	0.69	[-11.1, 46.74]	1.24	0.220

Summary

While the results of a logistic regression provide little support for the idea that the student's or his/her teacher's choice of the student's AR goals will enhance the student's chances of AR goal attainment, other analyses suggest that the student's choosing can

have positive effects. An OLS regression analysis of students' easyCBM posttest scores indicates that, controlling for prior achievement, easyCBM pretest scores, and other demographic variables, allowing the student to choose his or her own goals is linked to greater growth in reading. In terms of student affect, a similar sort of OLS analysis linked student choice of reading goals to improved attitudes towards recreational reading, but the link between student choice and improved attitudes towards academic reading was only observed among Grade 5 participants in the study.

Chapter 5

Discussion

This chapter presents the research findings followed by conclusions of the study as related to each research question. Limitations of the study are addressed and recommendations for future research are presented. In conclusion, the potential significance of the study is discussed.

Methods and Procedures

The Accelerated Reader goal-setting research study was conducted by the researcher to examine reading comprehension growth and student attitudes towards reading. The purpose of this research study was to compare the impact of Teacher-Set Accelerated Reader goals (TSAR) with Student-Set Accelerated Reader goals (SSAR) of fourth- and fifth-grade students on reading comprehension growth and student attitudes towards reading. Comprehension growth was measured with easyCBM testing and changes in attitudes towards reading were determined by student responses on the Elementary Reading Attitude Survey (ERAS).

Participants took an easyCBM progress monitoring test in March of 2016 to measure their reading achievement levels. This assessment served as a pretest for this research. Students completed the Elementary Reading Attitude Survey (ERAS) to determine their attitudes towards reading prior to the start of the study (McKenna & Kear, 1990).

After pretesting concluded, classrooms were randomly assigned to either the treatment (SSAR group) or the control group (TSAR group). For a six-week period, all

students participated in their regular ELA classes. Accelerated Reader was used as a supplemental program.

When determining AR goals for the Teacher-Set Accelerated Reader Goals group (TSAR), teachers used their own method for determining what student goals should be. Their decisions were based on assessment performance and classroom observations. All students were encouraged to read for at least 30 uninterrupted minutes daily.

When discussing goals with participants in the Student-Set Accelerated Reader Goals group (SSAR), the teachers ensured each student understood the due date for the goals as well as reminded them of the importance of setting high, yet reasonable expectations for themselves. The teachers accepted all goals students set for themselves. All students were encouraged to read for at least 30 uninterrupted minutes daily.

Upon the conclusion of the 6-week research period, post-tests were administered. Students completed another ERAS and an easyCBM progress monitoring assessment. All data was entered into Survey Monkey and analyzed accordingly.

Major Findings

Creating four categories by crossing a student's grade level with his/her treatment group and then graphing the percentages meeting AR Goals suggests a near equivalent impact of goal choice on meeting one's goals at Grade 4 but a decidedly different one at Grade 5. At the latter grade, almost 100% of students who had the teacher select their goals achieved them, compared to about 66% of students who selected their own goals. To confirm the accuracy of these observations, separate logistic regressions were conducted on the two grade levels. No effect of treatment was noted for Grade 4 (Wald statistic = 0.04, $p = .85$), but was observed for Grade 5 (Wald statistic = 10.00, $p < .001$).

When the other variables in the model are included, neither a student's gender nor his/her prior achievement proved to be significant predictors of easyCBM posttest scores, and none of the interaction terms contributed any precision to the findings over and above these main effects.

When the effect of students' membership in either the SSAR or TSAR group was isolated, SSAR membership proved to be highly predictive of more positive attitudes towards recreational reading (β = -.018, t =--2.96, p =.004), after taking into account students' prior reading achievement, pretest ERAS scores, demographic characteristics, and possible interactions of these variables. Together, students' ERAS pretest scores in recreational reading and their group membership explain about half of the variation in their ERAS posttest scores in recreational reading.

The students' grade level by their experimental group suggests that the interaction effect owes to the positive difference between pretest and posttest scores for ERAS academic reading that is seen for the SSAR group at Grade 5 only. Further warranting this a conclusion is the follow-up regression analyses separated by grade level. Therein, no effect for the group variable is observed for Grade 4 (β = -0.04, t = -0.56, p = .577), but is seen for Grade 5 (β = -0.34, t = -2.94, p = .005), the negatively-signed value indicating higher values for the SSAR group.

Perhaps members of the TSAR group were more likely to attain their goals because they did not want their teachers to think poorly of them? Maybe students were afraid that if they did not live up to the teacher's standards, then they would be punished in some way? Maybe students who set their own goals were overly ambitious therefore members of the TSAR had more reasonable goals? Perhaps TSAR goals were more

reasonable because SSAR members needed to participate in training opportunities to better equip them with the ability to set goals for themselves? All of these possibilities open up numerous avenues in which future research can be conducted.

Discussion

In terms of goal achievement, TCAP levels had the strongest relationship with the achievement of goals. Genders were equally likely to have achieved their goals. Fifth-grade students were more likely to attain their goals. The researcher believes this was due to fifth-grade students being slightly more mature than fourth-grade students. Furthermore, students might feel more comfortable and confident in reading when they reach fifth-grade. TSAR students were more likely to attain their goals. Perhaps the SSAR students were overly ambitious when they set their goals.

In regard to reading growth, females gained <1% correct on the EasyCBM posttest. Males declined by 1.5% correct. Fourth-grade students' scores decreased overall and fifth-grade students' scores increased. Again, perhaps maturity level plays a role in this. However, the SSAR group gained an average of a percentage point. The TSAR group lost more than two percentage points.

In terms of recreational reading attitudes, neither gender nor grade level were determined to be predictors of ERAS academic reading posttest scores. TCAP scores appeared to be positively correlated with pretest and posttest scores. There was an overall decline in scores for all students. This conclusion presents the question of whether AR negatively impacts a student's will to read recreationally. Does AR ruin a child's love for reading? SSAR students experienced a smaller decline than TSAR

students. However, further analysis indicated SSAR membership proved to be highly predictive of positive attitudes in recreational reading.

In regard to academic reading attitudes, there was an overall decline in scores for all students. SSAR students experienced a smaller decline than TSAR students. A student's disposition towards academic reading did not appear to be linked to TCAP scores. TSAR members had higher pretest attitudes. The link between SSAR members and improved attitudes was only observed in Grade 5.

Limitations

Due to the fact that the study was conducted in a public school setting in which all classrooms were not identical in demographic make-up, certain limitations did exist within the study. The background of the participants was limited to the specific characteristics of only those students who returned informed consent paperwork at the particular elementary school in which the study was conducted. This situation lead to inequalities in the number of students in the TSAR and SSAR groups, as well as in their corresponding grade levels. This limits the equality of the treatment and control groups.

The experience among teachers and the way in which they implemented AR and set AR goals varied in each classroom in the TSAR group. Furthermore, the study was limited to a six-week period due to the fast approaching conclusion of the school year. These factors may have affected the results of the Elementary Reading Attitude Survey, as well as the easyCBM.

Recommendations

If this study were to be conducted again, several recommendations could be taken into consideration in order to make this a more substantial study. Implementing the study

for more than a six week time period might possibly have several benefits. Furthermore, if an abundance of participants were available, the researcher could choose participants with similar demographic backgrounds therefore creating equality among the groups. Ideally, there should also be an equal number of participants in both the treatment and control groups.

If this study were to be conducted again and extended, the differences in the goals students in the SSAR group set for themselves and what their goals would have been if they were provided by the teacher could be explored. This could be done by placing all students in the TSAR group for a nine-week period and then placed in the SSAR group for the subsequent nine weeks. Each student's performance in the SSAR group could be compared to their individual performance in the TSAR group. In addition to this modification, more than one school could be included in the study. This could lead to larger samples, comparison among schools and districts, and possible analyses of different demographic information. Furthermore, the ways each teacher implements AR and determines goals could also be examined for significant trends.

Carroll and Christenson (1995) studied a fifth-grade classroom in which students set their own AR goals. The researchers found that students needed help with setting appropriate goals, establishing an environment conducive to the process of setting goals, relating their learning to individual goals, and determining self-evaluation techniques. If the current study were to be conducted again, more of an emphasis could be placed on students receiving instruction in regard to the goal setting process.

Conclusions

While the results of a logistic regression provide little support for the idea that the student's or his/her teacher's choice of the student's AR goals will enhance the student's chances of AR goal attainment, other analyses suggest that the student's choosing can have positive effects. An OLS regression analysis of students' easyCBM posttest scores indicates that, controlling for prior achievement, easyCBM pretest scores, and other demographic variables, allowing the student to choose his or her own goals is linked to greater growth in reading. In terms of student affect, a similar sort of OLS analysis linked student choice of reading goals to improved attitudes towards recreational reading, but the link between student choice and improved attitudes towards academic reading was only observed among Grade 5 participants in the study.

TSAR members were more likely to meet their goals than SSAR members, but SSAR outshined TSAR in the other areas. Fifth-grade students were more likely to achieve their goals and score higher on the easyCBM than fourth grade students. TCAP was a good predictor on the outcome for all research questions. There was an overall decline in attitudes towards reading overall.

A current gap in knowledge exists as it relates to Accelerated Reader (AR) and the method in which goals are set. The current study contributes to the existing literature pertaining to AR by investigating the impact of AR goals and the method in which they are assigned. Furthermore, a majority of the research pertaining to AR is quite dated, therefore there is a need for more current research to be conducted.

Implications

After determining reading achievement impacted all content areas, Melton, Smothers, and Anderson (2004) called for a need for additional research to be conducted to determine if student motivation changed before and after a student actively participates in the AR program. The present study fulfills these recommendations.

As students reach the upper elementary grades, motivation towards success tends to become a problem. To combat this issue, students should take an ownership role in their goals and evaluations in education (Carroll & Christenson, 1995). Platz (1994) notes the boredom students experience while engaged in routine learning strategies can be remedied if students become involved in how their learning takes place. Student achievement can be improved via formative assessment practices with a goal of student ownership of learning. Educators can take the results of this study into consideration when trying to combat this problem.

References

About EasyCBM. (2015) Retrieved from https://easycbm.com/about.html

Bastug, M. (2014). The structural relationship of reading attitude, reading comprehension and academic achievement. *International Journal of Social Sciences & Education, 4*(4), 931-945. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=97082939&site=ehost-live

Carroll, J., & Christenson, C. (1995). Teaching and Learning about Student Goal Setting in a Fifth-Grade Classroom. *Language Arts, 72*(1), 42-49. Retrieved from http://www.jstor.org.ezproxy.memphis.edu/stable/41482160

Chan, P. E., Graham-Day, K., Ressa, V. A., Peters, M. T., & Konrad, M. (2014). Beyond involvement: Promoting student ownership of learning in classrooms. *Intervention in School & Clinic, 50*(2), 105-113. doi:10.1177/1053451214536039. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=98673803&site=ehost-live

Chua, S. P. (2008). The effects of the sustained silent reading program on cultivating students' habits and attitudes in reading books for leisure. *Clearing House, 81*(4), 180-184. doi:10.3200/TCHS.81.4.180-184. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=508049231&site=ehost-live

Corcoran, C. A., & Mamalakis, A. (2009). Fifth grade students' perceptions of reading motivation techniques. *Reading Improvement, 46*(3), 137-142. Retrieved from

http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=508098250&site=ehost-live

Cregar, E. (2011). Browsing by numbers and reading for points. *Knowledge Quest*, *39*(4), 40-45. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=503011822&site=ehost-live

Cudderback, M. J., & Ceprano, M. A. (2002). The use of Accelerated Reader with emergent readers. *Reading Improvement*, *39*(2), 89-96. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=507774858&site=ehost-live

easyCBM. (n.d.). Retrieved from https://secure2.easycbm.com/index.php

easyCBM overview manual. (2014). The Houghton Mifflin Harcourt/Riverside Publishing Company. Retrieved from https://secure2.easycbm.com/teachers/auth/resources.php?get_file=easyCBM_OverviewManual.pdf

Embrey, S. L. (2011). *Skill versus will: An investigation of a relationship between motivation to read, oral reading fluency, and demographics for third-grade elementary students.* (Ed.D., Walden University). Available from ProQuest Dissertations and Theses database. (UMI No. 860944575) Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2011-99230-201&site=ehost-live

Everhart, N. (2005). A crosscultural inquiry into the levels of implementation of accelerated reader and its effect on motivation and extent of reading: Perspectives

from scotland and england [computer file]. *School Library Media Research*, *8*, 1-1. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=502943303&site=ehost-live

Gambrell, L. B. (2011). Motivation in the school reading curriculum. *Journal of Reading Education, 37*(1), 5-14. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=525916371&site=ehost-live

Grigsby, S. K. (2014). The story is more important than the words. *Knowledge Quest, 43*(1), 22-28. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=97937359&site=ehost-live

Groce, R. D., & Groce, E. C. (2005). Deconstructing the Accelerated Reader program. *Reading Horizons, 46*(1), 17-30. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=507820271&site=ehost-live

Guastello, F. (2002). Accelerated Reader. *Knowledge Quest, 30*(4), 53-55. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=502876252&site=ehost-live

Guided independent reading. (2012). Renaissance Learning, Inc. Retrieved from http://doc.renlearn.com/KMNet/R005577721AC3667.pdf

Hannafin, M. J. (1981). Effects of teacher and student goal setting and evaluations on mathematics achievement and student attitudes. *Journal of Educational Research, 74*, 321-326. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eir&AN=519784072&site=ehost-live

Huang, S. (2011). A mixed method study of the effectiveness of the Accelerated Reader program on middle school students' reading achievement and motivation. *Reading Horizons*, *51*(3), 229-246. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=83823338&site=ehost-live

Husman, J., & Brem, S. (2005). Findings from a three-year study of reading renaissance in a title I urban elementary school. Retrieved from http://doc.renlearn.com/KMNet/R004077026GJ8541.pdf

Husman, J., Brem, S., & Duggan, M. A. (2005). Student goal orientation and formative assessment. *Academic Exchange Quarterly, 9*(3), 355–359. Retrieved from http://www.rapidintellect.com/AEQweb/5oct3047l5.htm

Jimenez, B. A., Browder, D. M., & Courtade, G. R. (2009). An exploratory study of self-directed science concept learning by students with moderate intellectual disabilities. *Research & Practice for Persons with Severe Disabilities*, *34*(2), 33-46. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=508077825&site=ehost-live

Johnson, L., Graham, S., & Harris, K. R. (1997). The effects of goal setting and self-instruction on learning a reading comprehension strategy: A study of students with learning disabilities. *Journal of Learning Disabilities, 30*, 80-91. doi:10.1177/002221949703000107. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=507543694&site=ehost-live

Johnson, R., & Howard, C. (2003). The effects of the Accelerated Reader program on the reading comprehension of pupils in grades three, four, and five. The Reading Matrix, 3(3), 87–96. Retrieved from http://www.readingmatrix.com/articles/johnson_howard/article.pdf

Join the renaissance team. (2016). Renaissance Learning, Inc. Retrieved from http://www.renaissance.com/about-us/careers/

Kamhi, A. G. (2009). Solving the reading Crisis—Take 2: The case for differentiated assessment. *Language, Speech & Hearing Services in Schools, 40*(2), 212-215. doi:10.1044/0161-1461(2009/08-0069). Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=508052274&site=ehost-live

Klauda, S. L., & Wigfield, A. (2012). Relations of perceived parent and friend support for recreational reading with children's reading motivations. *Journal of Literacy Research, 44*(1), 3-44. doi:10.1177/1086296X11431158. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=83577186&site=ehost-live

Krashen, S. D. (2003). The (lack of) experimental evidence supporting the use of Accelerated Reader. *Journal of Children's Literature, 29*(2), 9-30. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=507859872&site=ehost-live

Lindblom, K. (2005). Reversing the decline of literary reading. *English Journal, 94*(3), 81-82. doi:10.2307/30046425

Long, T., & Bonds-Raacke, J. (2012). Accelerated Reader: The relation to age of entry into formal education. *Reading Improvement, 49*(4), 168-182. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=84534804&site=ehost-live

Madden, L. (1997). Motivating students to learn better through own goal-setting. *Education, 117*, 411. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=507573968&site=ehost-live

Martin, A. J., & Elliot, A. J. (2016). The role of personal best (PB) goal setting in students' academic achievement gains. *Learning & Individual Differences, 45*, 222-227. doi:10.1016/j.lindif.2015.12.014. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=112948711&site=ehost-live

McGlinn, J. M., & Parrish, A. (2002). Accelerating ESL students' reading progress with Accelerated Reader. *Reading Horizons, 42*(3), 175-189. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=ofm&AN=507733155&site=ehost-live

McKenna, M. C., Conradi, K., Lawrence, C., Jang, B. G., & Meyer, J. P. (2012). Reading attitudes of middle school students: Results of a U.S. survey. *Reading Research Quarterly, 47*(3), 283-306. doi:10.1002/rrq.021. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=77500751&site=ehost-live

McKenna, M. C., & Kear, D. J. (1990). Measuring attitude toward reading: A new tool for teachers. *Reading Teacher, 43*, 626-639. doi:10.1598/RT.43.8.3. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=508386952&site=ehost-live

McMaster, K. L., Jung, P., Brandes, D., Pinto, V., Fuchs, D., Kearns, D., . . . Yen, L. (2014). Customizing a research-based reading practice. *Reading Teacher, 68*(3), 173-183. doi:10.1002/trtr.1301. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=99076736&site=ehost-live

Melton, C. M., Smothers, B. C., & Anderson, E. (2004). A study of the effects of the Accelerated Reader program on fifth grade students' reading achievement growth. *Reading Improvement, 41*(1), 18-23. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=507901707&site=ehost-live

Miller, D. (2012). Creating a classroom where readers flourish. *Reading Teacher, 66*(2), 88-92. doi:10.1002/TRTR.01109. Retrieved from

http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=82141962&site=ehost-live

Morgan, P. L., Fuchs, D., Compton, D. L., Cordray, D. S., & Fuchs, L. S. (2008). Does early reading failure decrease children's reading motivation? *Journal of Learning Disabilities, 41*(5), 387-404. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=33994050&site=ehost-live

Moyer, M., & Williams, M. (2011). Personal programming. *Knowledge Quest, 39*(4), 68-73. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=503011799&site=ehost-live

NEA report: Reading at risk. (2004). *Arts Education Policy Review, 106*(1), 38-39. doi:10.3200/AEPR.106.1.38-40

Nunnery, J. A., Ross, S. M., & McDonald, A. (2006). A randomized experimental evaluation of the impact of Accelerated Reader/Reading Renaissance implementation on reading achievement in grades 3 to 6. Journal of Education for Students Placed At Risk, 11(1), 1–18. Retrieved from http://www.memphis.edu/crep/pdfs/accelerated_reader_jespar_11_1__1-18.pdf

Our mission: To accelerate learning for all. (2016). Renaissance Learning, Inc. Retrieved from http://www.renaissance.com/about-us/

Our story. (2016). Renaissance Learning, Inc. Retrieved from http://www.renaissance.com/about-us/

Pavonetti, L. M., Brimmer, K. M., & Cipielewski, J. F. (2002). Accelerated Reader: What are the lasting effects on the reading habits of middle school students exposed to Accelerated Reader in elementary grades? *Journal of Adolescent & Adult Literacy, 46*(4), 300-311. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=507792014&site=ehost-live

Pfeiffer, C. (2011). Achieving a standard of reading excellence in Kansas. *Knowledge Quest, 39*(4), 60-67. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=503011805&site=ehost-live

Platz, D. L. (1994). Student directed planning: Fostering student ownership in learning. *Education, 114*, 420-422. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=508516077&site=ehost-live

Ross, S., Nunnery, J., Avis, A., & Borek, T. (2005). The effects of school renaissance on student achievement in two Mississippi school districts. Center for Research and Educational Policy.

Sadusky, L., & Brem, S. (2002). The integration of Renaissance programs into an urban title I elementary school, and its effect on school-wide improvements. 2001-2002 Annual Report to Renaissance Learning, Inc.

Samuels, S., & Wu, Yi-Chen. (2003). The effects of immediate feedback on reading achievement. Retrieved from http://research.renaissance.com/research/177.asp

Schaffner, E., Schiefele, U., & Ulferts, H. (2013). *Reading amount as a mediator of the effects of intrinsic and extrinsic reading motivation on reading comprehension* doi:10.1002/rrq.52. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=90470446&site=ehost-live

Schiefele, U., Schaffner, E., Möller, J., Wigfield, A., Nolen, S., & Baker, L. (2012). *Dimensions of reading motivation and their relation to reading behavior and competence* doi:10.1002/RRQ.030. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=82336110&site=ehost-live

Shannon, L., Styers, M., Wilkerson, S., & Peery, E. (2015). Computer-assisted learning in elementary reading: A randomized control trial. Computers in the Schools, 32(1), 20-34.

Sideris, G. D. (2002). Goal importance and students at risk of having language difficulties: An unexplored aspect of student motivation. *Journal of Learning Disabilities, 35*(4), 343-356. doi:10.1177/00222194020350040501. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=507772019&site=ehost-live

Solley, K. (2011). Accelerated Reader can be an effective tool to encourage and bolster student reading. *Knowledge Quest, 39*(4), 46-49. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=503011819&site=ehost-live

Spichtig, A., Hiebert, E., Vorstius, C., Pascoe, J., Pearson, P., & Radach, R. (2016). The decline of comprehension-based silent reading efficiency in the united states: A comparison of current data with performance in 1960. *Reading Research Quarterly, 51*(2), 239-259. doi:10.1002/rrq.137

Swain, K. D. (2005). CBM with goal setting: Impacting students' understanding of reading goals. *Journal of Instructional Psychology, 32*(3), 259-265. Retrieved from http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=ofm&AN=507821058&site=ehost-live

Tennessee Department of Education. (2016). *State Report Card*. Retrieved from https://www.tn.gov/education/topic/report-card

Topping, K. J., & Fisher, A. M. (2003). Computerised formative assessment of reading comprehension: Field trials in the U.K. Journal of Research in Reading, 26(3), 267–279. Retrieved from http://www.renlearn.co.uk/wpcontent/uploads/2010/12/Computerised%20formative%20assessment%20of%20reading%20comprehensi on.pdf

Topping, K. J., & Paul, T. (1999). Computer-assisted assessment of practice at reading: A large scale survey using Accelerated Reader data. Reading and Writing Quarterly, 15(3), 213–231. Retrieved from http://ncset.uoregon.edu/ncset_media/refbase/Marilyn%20papers/Topping1999Assessment.pdf

Van Deur, P. (2008). Assessing the effect of explicit teaching on high reasoning primary students' knowledge of self-directed learning. *Gifted & Talented International, 23*(1), 141-152. Retrieved from

http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=507993074&site=ehost-live

Vollands, S. R., Topping, K. J., & Evans, H. M. (1999). Computerized self-assessment of reading comprehension with the Accelerated Reader: Action research. Reading and Writing Quarterly, 15(3), 197–211. Retrieved from http://ncset.uoregon.edu/ncset_media/refbase/Marilyn%20papers/Vollands1999accelerated.pdf

Westburg, N. G., & Martin, D. (2003). The relationship between a child's hope, a parent's hope, and student-directed, goal-oriented academic instruction. *Journal of Humanistic Counseling, Education & Development, 42*(2), 152-164.

Williamson, A. M. (2008). *An examination of the relationship of Accelerated Reader implementation, secondary reading programs, and TAKS reading pass rates for ninth grade students in selected central Texas school districts.* (Ed.D., Baylor University). Available from ProQuest Dissertations and Theses database. (UMI No. 304690288). Retrieved from http://search.proquest.com/docview/304690288?accountid=14582

Worrell, F. C., Roth, D. A., & Gabelko, N. H. (2007). Elementary reading attitude survey (ERAS) scores in academically talented students. *Roeper Review, 29*(2), 119-124. doi:10.1080/02783190709554395

Zentall, S. S. & Lee, J. (2012). A reading motivation intervention with differential outcomes for students at risk for reading disabilities, ADHD, and typical comparisons: “Clever is and clever does.” *Learning Disability Quarterly, 35*(4), 248-259. doi:10.1177/0731948712438556. Retrieved from

http://ezproxy.memphis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eft&AN=85871150&site=ehost-live

Appendix A

Elementary Reading Attitude Survey

School_____ Grade_____ Name_____

Please circle the picture that describes how you feel when you read a book.

1. How do you feel when you read a book on a rainy Saturday?

2. How do you feel when you read a book in school during free time?

3. How do you feel about reading for fun at home?

4. How do you feel about getting a book for a present?

Page 1

Survey designed by Dennis J. Kear, Wichita State University

Please circle the picture that describes how you feel when you read a book.

5. How do you feel about spendng free time reading a book?

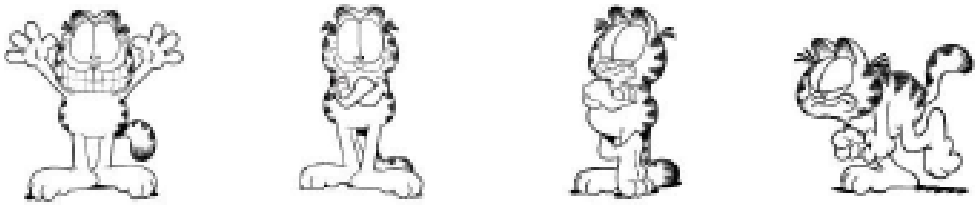
6. How do you feel about starting a new book?

7. How do you feel about reading during summer vacation?

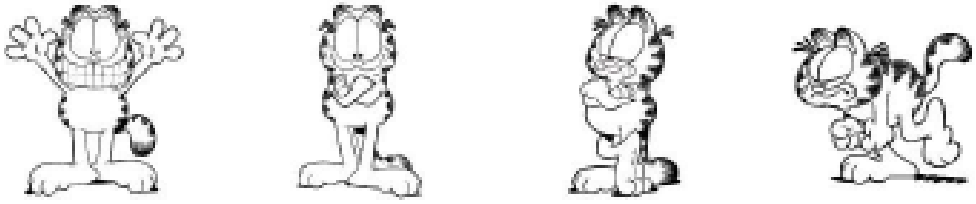
8. How do you feel about reading instead of playing?

Please circle the picture that describes how you feel when you read a book.

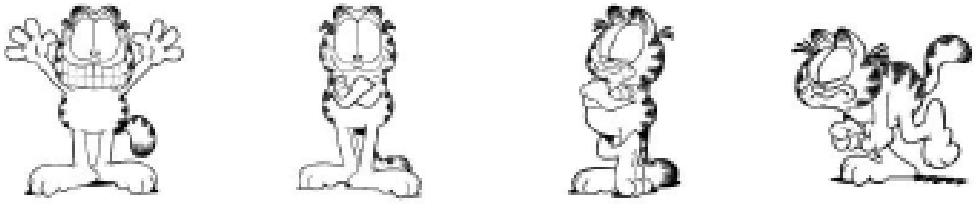
9. How do you feel about going to a bookstore?



10. How do you feel about reading different kinds of books?



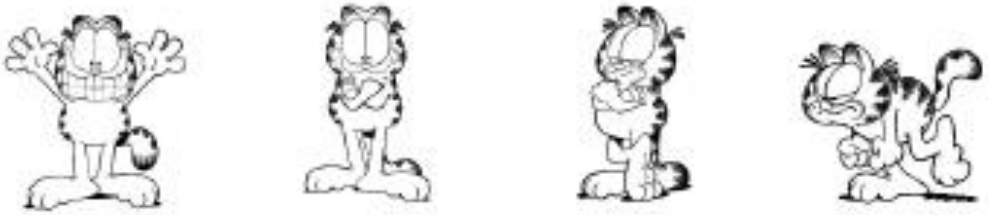
11. How do you feel when a teacher asks you questions about what you read?



12. How do you feel about reading workbook pages and worksheets?

Please circle the picture that describes how you feel when you read a book.

13. How do you feel about reading in school?



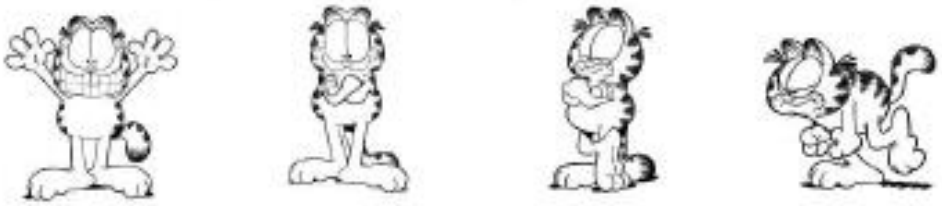
14. How do you feel about reading your school books?

15. How do you feel about learning from a book?

16. How do you feel when it's time for reading in class?

Please circle the picture that describes how you feel when you read a book.

17. How do you feel about stories you read in reading class?



18. How do you feel when you read out loud in class?

19. How do you feel about using a dictionary?

20. How do you feel about taking a reading test?

Page 5

Appendix B

E-MAIL TO TEACHERS

Good afternoon! As you already know, I am in the process of earning my doctorate degree in Instruction and Curriculum Leadership from the University of Memphis. I need your help with a study I plan on conducting at school. Please read the description of my study below. If you would be interested in participating in my research, please attend a meeting in room 611 on <date to be announced> at 3:15.

Study Goal: The focus of this study is to examine the impact of teacher-set Accelerated Reader (AR) goals and student-set AR goals of fourth- and fifth-grade students' attitudes towards reading and reading growth at Atoka Elementary School.

Study design: This study will be developed using a quasi-experimental design. The study will take place during a six week period of March/April of the 2016 school year. All participants will take an easyCBM progress monitoring assessment and the Elementary Reading Attitude Survey (ERAS) at the beginning of the study in March. Participants will be expected to meet AR goals set for a six week period. One group of students will set their own goals while the other group will be given goals set by their teacher. At the end of the trial period, students will complete another ERAS and easyCBM progress monitoring assessment.

Thank you for your help in this matter! I'm looking forward to meeting with you soon!

Appendix C

MEETING AGENDA

Date: 3-18-16

I. Overview & Purpose of the Study

II. Procedure

III. Pre-Assessments

IV. Coding

V. Data Charts

VI. Group Assignments

VII. Process of Goal Setting

VIII. Reading Ranges

IX. Incentives

X. Post- Assessments

XI. Consent Paperwork

XII. Due Dates

XIII. Teacher Information

Appendix D

Parental Permission for Your Child to Participate in a Research Study

The Effects of Teacher-Set and Student-Set Accelerated Reader Goal Setting on Reading Comprehension and Student Attitudes towards Reading in Fourth- and Fifth-Grade Students

WHY IS YOUR CHILD BEING INVITED TO TAKE PART IN THIS RESEARCH?

Your child is being invited to take part in a research study about Accelerated Reader goals. Your child is being invited to take part in this research study because of his/her participation in the Accelerated Reader program at Atoka Elementary School. If your child takes part in this study, your child will be one of about 300 children to do so.

WHO IS DOING THE STUDY?

The person in charge of this study is Tiffany Tucker of The University of Memphis Department of Instruction and Curriculum Leadership. She is being guided in this research by Dr. Renee Murley. There may be other people on the research team assisting at different times during the study.

WHAT IS THE PURPOSE OF THIS STUDY?

The purpose of this study is to examine the impact of teacher-set Accelerated Reader (AR) goals and student-set AR goals of fourth- and fifth-grade students' attitudes towards reading and reading comprehension growth at Atoka Elementary School.

By doing this study, we hope to determine which method of AR goal-setting has a more positive impact on the reading comprehension growth of our students, as well as any contribution the methods might have on students' attitudes towards reading.

ARE THERE REASONS WHY YOUR CHILD SHOULD NOT TAKE PART IN THIS STUDY?

A subject can be excluded from the study if a consent is not obtained by the parent.

WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST?

The research procedures will be conducted at Atoka Elementary School. Your child will need to attend school as usual during this study. Students will participate in the Accelerated Reader study for six weeks beginning March 14.

WHAT WILL YOUR CHILD BE ASKED TO DO?

Half of the teachers will be asked to set their students' AR goals for the fourth nine-weeks like normal. The other half of the teachers will let the students set their own goals. Students will take an EasyCBM progress monitoring assessment before and after the study to measure reading comprehension growth. Students will also take the Elementary Reading Attitude Survey (ERAS) before and after the study to measure changes in attitudes towards reading.

WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?

To the best of our knowledge, the things your child will be doing have no more risk of harm than your child would experience in everyday life.

WILL YOUR CHILD BENEFIT FROM TAKING PART IN THIS STUDY?

There is no guarantee that your child will get any benefit from taking part in this study. However, some people have experienced reading comprehension growth and changes in attitudes towards reading when the implementation of AR is manipulated.

DOES YOUR CHILD HAVE TO TAKE PART IN THE STUDY?

If you decide to allow your child take part in the study, it should be because your child really wants to volunteer. Your child will not lose any benefits or rights your child would normally have if your child chooses not to volunteer. Your child can stop at any time during the study and still keep the benefits and rights your child had before volunteering. If you or your child decides not to take part in this study, your child's decision will have no effect on the quality of care, services, etc., your child receives.

IF YOUR CHILD DOESN'T WANT TO TAKE PART IN THE STUDY, ARE THERE OTHER CHOICES?

If your child does not want to take part in the study, he/she will follow the normal rules set forth by the teacher in regard to the implementation of AR.

WHAT WILL IT COST YOU FOR YOUR CHILD TO PARTICIPATE?

There are no costs associated with taking part in the study.

WILL YOUR CHILD RECEIVE ANY REWARDS FOR TAKING PART IN THIS STUDY?

Your child will not receive any rewards or payment for taking part in the study.

WHO WILL SEE THE INFORMATION THAT YOUR CHILD PROVIDES?

We will make every effort to keep private all research records that identify your child to the extent allowed by law.

Your child's information will be combined with information from other children taking part in the study. When we write about the study to share it with other researchers, we will write about the combined information we have gathered. Your child will not be

personally identified in these written materials. We may publish the results of this study; however, we will keep your child's name and other identifying information private. We will make every effort to prevent anyone who is not on the research team from knowing that your child gave us information, or what that information is. In order to ensure confidentiality, each participant will be assigned a number. For the duration of this study, each student will be referred to by the researcher according to their given number. The researcher will give each teacher a master list of student names matched with their number. An original copy will be kept in the researcher's locked desk drawer. We will keep private all research records that identify your child to the extent allowed by law. However, there are some circumstances in which we may have to show your child's information to other people. For example, guiding researchers and statisticians might have to view information for analytical purposes. Furthermore, the law may require us to show your child's information to a court or to tell authorities if your child reports information about a child being abused or if your child poses a danger to your child or someone else. Also, we may be required to show information which identifies your child to people who need to be sure we have done the research correctly; these would be people from such organizations as the University of Memphis.

CAN YOUR CHILD'S TAKING PART IN THE STUDY END EARLY?

If your child decides to take part in the study, your child still has the right to decide at any time that your child no longer wants to continue. Your child will not be treated differently if your child decides to stop taking part in the study.

The individuals conducting the study may need to withdraw your child from the study. This may occur if your child is not able to follow the directions they give your child, if

they find that your child's being in the study is more risk than benefit to your child, or if the agency funding the study decides to stop the study early for a variety of scientific reasons. If you would like to withdraw your child from the program, contact your child's teacher. The teacher will relay the information to the researcher.

WHAT HAPPENS IF YOUR CHILD GETS HURT OR SICK DURING THE STUDY?

It is important for your child to understand that the University of Memphis does not have funds set aside to pay for the cost of any care or treatment that might be necessary because your child gets hurt or sick while taking part in this study. Also, the University of Memphis will not pay for any wages your child may lose if your child is harmed by this study.

Medical costs that result from research related harm cannot be included as regular medical costs. Therefore, the medical costs related to your child's care and treatment because of research related harm will be your responsibility.

Your child does not give up your child's legal rights by signing this form.

WHAT IF YOUR CHILD HAS QUESTIONS, SUGGESTIONS, CONCERNS, OR COMPLAINTS?

Before you decide whether to accept this invitation for your child to take part in the study, please ask any questions that might come to mind now. Later, if you have questions, suggestions, concerns, or complaints about the study, you can contact the investigator, Tiffany Tucker at (901)840-9525. If you have any questions about your child's rights as a volunteer in this research, contact the Institutional Review Board staff

at the University of Memphis at 901-678-3074. We will give you a signed copy of this permission form to take with you.

WHAT IF NEW INFORMATION IS LEARNED DURING THE STUDY THAT MIGHT AFFECT YOUR CHILD'S DECISION TO PARTICIPATE?

If the researcher learns of new information in regards to this study, and it might change your willingness for your child to stay in this study, the information will be provided to you. You may be asked to sign a new permission form if the information is provided to you after your child has joined the study.

_____ _____

Signature of person agreeing to take part in the study Date

_____

Printed name of person agreeing to take part in the study

_____ _____

Name of [authorized] person obtaining informed consent Date

Appendix E

Hello,

The University of Memphis Institutional Review Board, FWA00006815, has reviewed and approved your submission in accordance with all applicable statuses and regulations as well as ethical principles.

PI NAME: Tiffany Tucker

CO-PI:

PROJECT TITLE: The Effects of Teacher-Set and Student-Set Accelerated Reader Goal Setting on Reading Comprehension and Student Attitudes towards Reading in Fourth- and Fifth-Grade Students

FACULTY ADVISOR NAME (if applicable): Renee Murley

IRB ID: #4042

APPROVAL DATE: 2/25/2016

EXPIRATION DATE:

LEVEL OF REVIEW: Exempt

Please Note: Modifications do not extend the expiration of the original approval

Approval of this project is given with the following obligations:

1. If this IRB approval has an expiration date, an approved renewal must be in effect to continue the project prior to that date. If approval is not obtained, the human consent form(s) and recruiting material(s) are no longer valid and any research activities involving human subjects must stop.

2. When the project is finished or terminated, a completion form must be completed and sent to the board.

3. No change may be made in the approved protocol without prior board approval, whether the approved protocol was reviewed at the Exempt, Exedited or Full Board level.

4. Exempt approval are considered to have no expiration date and no further review is necessary unless the protocol needs modification.

Approval of this project is given with the following special obligations:

Thank you,

James P. Whelan, Ph.D.

Institutional Review Board Chair

The University of Memphis.

Note: Review outcomes will be communicated to the email address on file. This email should be considered an official communication from the UM IRB.

Appendix F

Dr. Bibb, Dr. Byrd, and Dr. Combs,

Good afternoon! As you already know, I am in the process of earning my doctorate degree in Instruction and Curriculum Leadership from the University of Memphis. I would like to obtain permission from you to conduct my study during our current spring semester. I will not proceed with the study until I receive permission from you all. I will also obtain IRB approval before proceeding. Below you will find a summary of my study.

Study Goal: The focus of this study is to examine the impact of teacher-set Accelerated Reader (AR) goals and student-set AR goals of fourth- and fifth-grade students' attitudes towards reading and reading comprehension growth at Atoka Elementary School.

Study design: This study will be developed using a quasi-experimental design. The study will take place during a six week period of March/April of the 2016 school year. All participants will take an easyCBM progress monitoring assessment and the Elementary Reading Attitude Survey (ERAS) at the beginning of the study in March. Participants will be expected to meet AR goals set for a six week period. One group of students will set their own goals while the other group will be given goals set by their teacher. At the end of the trial period, students will complete another ERAS and easyCBM progress monitoring assessment.

Procedures:

1. The researcher will e-mail the following Tipton County leaders requesting permission to proceed with the study:
    a. Dr. Rebekah Byrd, Principal of Atoka Elementary School

b. Dr. William Bibb, the Superintendent of Tipton County Schools

c. Dr. John Combs, Director of Instruction for Tipton County Schools

2. The researcher will e-mail teachers explaining the study and requesting a meeting for all educators interested in participating.
3. A meeting will be held in which teachers will be told of which group they belong. At this meeting, teachers will also be given informed consent paperwork to hand out to their students.
4. The researcher will also obtain basic information from each teacher in regard to how many years of teaching experience they have, their ethnicity, and the number of students they have in each class.
5. Once all informed consent forms are collected, student demographic information will be obtained from the teachers.
6. In order to ensure confidentiality, each participant will be assigned a number. For the duration of this study, each student will be referred to by the researcher according to their given number. The researcher will give each teacher a master list of student names matched with their number. An original copy will be kept in the researcher's locked desk drawer.
7. Participants will take a computerized easyCBM progress monitoring test (Sample Test - https://secure2.easycbm.com/static/files/pdfs/cbms/mcrc/Multiple_Choice_Reading_Comprehension_Grade_4_Form_3.pdf).
8. Participants will take the Elementary Reading Attitude Survey (ERAS is attached).

9. Teachers will record the pre-test data.
10. Participants will work for a six week period on meeting their AR goals.
11. At the end of the trial period, participants will take another easyCBM progress monitoring test.
12. At the end of the trial period, participants will retake the Elementary Reading Attitude Survey (ERAS).
13. Teachers will record post-test data.
14. Teachers will give data sheets to the researcher.
15. Results will be analyzed by the researcher.

Thank you for your time. Please let me know if you have any further questions.

-Tiffany Tucker

Dr. John Combs

To:

Tiffany G. Tucker;

Rebekah Byrd;

Dr. Buddy Bibb;

Wed 2/3/2016 3:11 PM

As long as nothing interferes with state testing - all looks good to me

jc

John Combs, Ed.D.

Director of Instruction

Tipton County Schools

1580 Hwy 51 South, Covington, TN 38019

www.tipton-county.com

Rebekah Byrd

To:

Tiffany G. Tucker;

From:

Rebekah Byrd

Sent: Wed 2/3/2016 1:18 PM

Sounds great. Thanks

Rebekah C. Byrd, Ed.D.

Principal

Atoka Elementary School

Appendix G

TEACHER INFORMATION CHART

Grade	Teacher	Ethnicity	Experience in Years	Highest Degree Earned	Number of Students
4th					
4th					
4th					
4th					
4th					
4th					
5th					
5th					
5th					

Appendix H

MASTER LIST OF STUDENT CODES

Teacher: _____ Grade: _____

Code	Student Name
1	
2	
3	
4	
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25	

Appendix I

STUDENT DEMOGRAPHIC INFORMATION CHART (SAMPLE)

Teacher: _____ Grade: _____ Group: _____

STUDENT	GRADE 4th Grade (1) 5th Grade (2)	ETHNICITY White (1) African-American (2) Other (3)	GENDER: Male (1) Female (2)	EDUCATION: Regular Ed. (1) Learning Lab (2) Gifted (3)	MET AR GOAL?: Yes (1) No (2)	2014-15 TCAP: Advanced (1) Proficient (2) Basic (3) Below Basic (4)
1						
2						
3						
4						
5						
6						
7						

Appendix J

EASYCBM DATA CHART

(Reading Comprehension)

STUDENT	easyCBM Progress Monitoring Assessment - March	easyCBM Progress Monitoring Assessment - April
1		
2		
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23		
24		

Appendix K

MASTER DATA CHART (SAMPLE)

Code	Grade Level	Group	Ethnicity	Gender	Education	Met AR Goal	TCAP	EasyCBM PreTest #	EasyCBM PreTest %	EasyCBM PostTest #	EasyCBM PostTest %	ERAS PreTest Raw – REC.	ERAS PreTest Raw – ACAD.	ERAS PreTest Raw –	ERAS PreTest Percentile – REC.	ERAS PreTest Percentile – ACAD.	ERAS PreTest Percentile – FULL SCALE	ERAS Posttest Raw –	ERAS Posttest Raw – ACAD.	ERAS Posttest Raw – FULL SCALE	ERAS Posttest Percentile – REC.	ERAS Posttest Percentile – ACAD.	ERAS Posttest Percentile – FULL SCALE
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1																							
2																							
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